



INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁷ : C12N 15/12, C07K 14/47, C12Q 1/68, A61K 39/395, G01N 33/68, 33/574, C07K 16/30, C12N 15/62, 5/02 // A61P 35/00	A2	(11) International Publication Number: WO 00/04149 (43) International Publication Date: 27 January 2000 (27.01.00)																					
(21) International Application Number: PCT/US99/15838 (22) International Filing Date: 14 July 1999 (14.07.99) (30) Priority Data: <table border="0" style="width: 100%;"> <tr> <td style="width: 30%;">09/115,453</td> <td style="width: 40%;">14 July 1998 (14.07.98)</td> <td style="width: 30%;">US</td> </tr> <tr> <td>09/116,134</td> <td>14 July 1998 (14.07.98)</td> <td>US</td> </tr> <tr> <td>09/159,822</td> <td>23 September 1998 (23.09.98)</td> <td>US</td> </tr> <tr> <td>09/159,812</td> <td>23 September 1998 (23.09.98)</td> <td>US</td> </tr> <tr> <td>09/232,880</td> <td>15 January 1999 (15.01.99)</td> <td>US</td> </tr> <tr> <td>09/232,149</td> <td>15 January 1999 (15.01.99)</td> <td>US</td> </tr> <tr> <td>09/288,946</td> <td>9 April 1999 (09.04.99)</td> <td>US</td> </tr> </table> (71) Applicant: CORIXA CORPORATION [US/US]; Suite 200, 1124 Columbia Street, Seattle, WA 98104 (US). (72) Inventors: DILLON, Davin, Clifford; 21607 N.E. 24th Street, Redmond, WA 98053 (US). HARLOCKER, Susan, Louise; 6203 20th Avenue N.W., Seattle, WA 98107 (US). YUQIU, Jiang; 5001 South 232nd Street, Kent, WA 98032 (US). XU, Jiangchun; 15805 S.E. 43rd Place, Bellevue, WA 98006 (US). MITCHAM, Jennifer, Lynn; 16677 Northeast 88th Street, Redmond, WA 98052 (US).		09/115,453	14 July 1998 (14.07.98)	US	09/116,134	14 July 1998 (14.07.98)	US	09/159,822	23 September 1998 (23.09.98)	US	09/159,812	23 September 1998 (23.09.98)	US	09/232,880	15 January 1999 (15.01.99)	US	09/232,149	15 January 1999 (15.01.99)	US	09/288,946	9 April 1999 (09.04.99)	US	(74) Agents: MAKI, David, J. et al.; Seed and Berry LLP, 6300 Columbia, 701 Fifth Avenue, Seattle, WA 98104-7092 (US). (81) Designated States: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG). Published <i>Without international search report and to be republished upon receipt of that report.</i>
09/115,453	14 July 1998 (14.07.98)	US																					
09/116,134	14 July 1998 (14.07.98)	US																					
09/159,822	23 September 1998 (23.09.98)	US																					
09/159,812	23 September 1998 (23.09.98)	US																					
09/232,880	15 January 1999 (15.01.99)	US																					
09/232,149	15 January 1999 (15.01.99)	US																					
09/288,946	9 April 1999 (09.04.99)	US																					
(54) Title: COMPOSITIONS AND METHODS FOR THERAPY AND DIAGNOSIS OF PROSTATE CANCER (57) Abstract <p>Compositions and methods for the therapy and diagnosis of cancer, such as prostate cancer, are disclosed. Compositions may comprise one or more prostate tumor proteins, immunogenic portions thereof, or polynucleotides that encode such portions. Alternatively, a therapeutic composition may comprise an antigen presenting cell that expresses a prostate tumor protein, or a T cell that is specific for cells expressing such a protein. Such compositions may be used, for example, for the prevention and treatment of diseases such as prostate cancer. Diagnostic methods based on detecting a prostate tumor protein, or mRNA encoding such a protein, in a sample are also provided.</p>																							

FOR THE PURPOSES OF INFORMATION ONLY

Codes used to identify States party to the PCT on the front pages of pamphlets publishing international applications under the PCT.

AL	Albania	ES	Spain	LS	Lesotho	SI	Slovenia
AM	Armenia	FI	Finland	LT	Lithuania	SK	Slovakia
AT	Austria	FR	France	LU	Luxembourg	SN	Senegal
AU	Australia	GA	Gabon	LV	Latvia	SZ	Swaziland
AZ	Azerbaijan	GB	United Kingdom	MC	Monaco	TD	Chad
BA	Bosnia and Herzegovina	GE	Georgia	MD	Republic of Moldova	TG	Togo
BB	Barbados	GH	Ghana	MG	Madagascar	TJ	Tajikistan
BE	Belgium	GN	Guinea	MK	The former Yugoslav Republic of Macedonia	TM	Turkmenistan
BF	Burkina Faso	GR	Greece			TR	Turkey
BG	Bulgaria	HU	Hungary	ML	Mali	TT	Trinidad and Tobago
BJ	Benin	IE	Ireland	MN	Mongolia	UA	Ukraine
BR	Brazil	IL	Israel	MR	Mauritania	UG	Uganda
BY	Belarus	IS	Iceland	MW	Malawi	US	United States of America
CA	Canada	IT	Italy	MX	Mexico	UZ	Uzbekistan
CF	Central African Republic	JP	Japan	NE	Niger	VN	Viet Nam
CG	Congo	KE	Kenya	NL	Netherlands	YU	Yugoslavia
CH	Switzerland	KG	Kyrgyzstan	NO	Norway	ZW	Zimbabwe
CI	Côte d'Ivoire	KP	Democratic People's Republic of Korea	NZ	New Zealand		
CM	Cameroon			PL	Poland		
CN	China	KR	Republic of Korea	PT	Portugal		
CU	Cuba	KZ	Kazakhstan	RO	Romania		
CZ	Czech Republic	LC	Saint Lucia	RU	Russian Federation		
DE	Germany	LI	Liechtenstein	SD	Sudan		
DK	Denmark	LK	Sri Lanka	SE	Sweden		
EE	Estonia	LR	Liberia	SG	Singapore		

COMPOSITIONS AND METHODS FOR THERAPY AND DIAGNOSIS OF PROSTATE CANCER

TECHNICAL FIELD

The present invention relates generally to therapy and diagnosis of cancer, such as prostate cancer. The invention is more specifically related to polypeptides comprising at least a portion of a prostate tumor protein, and to polynucleotides encoding such polypeptides. Such polypeptides and polynucleotides may be used in vaccines and pharmaceutical compositions for prevention and treatment of prostate cancer, and for the diagnosis and monitoring of such cancers.

BACKGROUND OF THE INVENTION

Prostate cancer is the most common form of cancer among males, with an estimated incidence of 30% in men over the age of 50. Overwhelming clinical evidence shows that human prostate cancer has the propensity to metastasize to bone, and the disease appears to progress inevitably from androgen dependent to androgen refractory status, leading to increased patient mortality. This prevalent disease is currently the second leading cause of cancer death among men in the U.S.

In spite of considerable research into therapies for the disease, prostate cancer remains difficult to treat. Commonly, treatment is based on surgery and/or radiation therapy, but these methods are ineffective in a significant percentage of cases. Two previously identified prostate specific proteins - prostate specific antigen (PSA) and prostatic acid phosphatase (PAP) - have limited therapeutic and diagnostic potential. For example, PSA levels do not always correlate well with the presence of prostate cancer, being positive in a percentage of non-prostate cancer cases, including benign prostatic hyperplasia (BPH). Furthermore, PSA measurements correlate with prostate volume, and do not indicate the level of metastasis.

In spite of considerable research into therapies for these and other cancers, prostate cancer remains difficult to diagnose and treat effectively. Accordingly, there is a need in the art for improved methods for detecting and treating such cancers. The present invention fulfills these needs and further provides other related advantages.

SUMMARY OF THE INVENTION

Briefly stated, the present invention provides compositions and methods for the diagnosis and therapy of cancer, such as prostate cancer. In one aspect, the present

invention provides polypeptides comprising at least a portion of a prostate tumor protein, or a variant thereof. Certain portions and other variants are immunogenic, such that the ability of the variant to react with antigen-specific antisera is not substantially diminished. Within certain embodiments, the polypeptide comprises at least an immunogenic portion of a prostate tumor protein, or a variant thereof, wherein the tumor protein comprises an amino acid sequence that is encoded by a polynucleotide sequence selected from the group consisting of: (a) sequences recited in any one of SEQ ID NOs:1-111, 115-171, 173-175, 177, 179-305, 307-315, 326, 328, 330, 332-335, 340-375, 381, 382 or 384-472; (b) sequences that hybridize to any of the foregoing sequences under moderately stringent conditions; and (c) complements of any of the sequence of (a) or (b). In certain specific embodiments, such a polypeptide comprises at least a portion, or variant thereof, of a tumor protein that includes an amino acid sequence selected from the group consisting of sequences recited in any one of SEQ ID NO: 112-114, 172, 176, 178, 327, 329, 331, 336, 339, 376-380 and 383.

The present invention further provides polynucleotides that encode a polypeptide as described above, or a portion thereof (such as a portion encoding at least 15 amino acid residues of a prostate tumor protein), expression vectors comprising such polynucleotides and host cells transformed or transfected with such expression vectors.

Within other aspects, the present invention provides pharmaceutical compositions comprising a polypeptide or polynucleotide as described above and a physiologically acceptable carrier.

Within a related aspect of the present invention, vaccines are provided. Such vaccines comprise a polypeptide or polynucleotide as described above and a non-specific immune response enhancer.

The present invention further provides pharmaceutical compositions that comprise: (a) an antibody or antigen-binding fragment thereof that specifically binds to a prostate tumor protein; and (b) a physiologically acceptable carrier.

Within further aspects, the present invention provides pharmaceutical compositions comprising: (a) an antigen presenting cell that expresses a polypeptide as described above and (b) a pharmaceutically acceptable carrier or excipient. Antigen presenting cells include dendritic cells, macrophages, monocytes, fibroblasts and B cells.

Within related aspects, vaccines are provided that comprise: (a) an antigen presenting cell that expresses a polypeptide as described above and (b) a non-specific immune response enhancer.

The present invention further provides, in other aspects, fusion proteins that comprise at least one polypeptide as described above, as well as polynucleotides encoding such fusion proteins.

Within related aspects, pharmaceutical compositions comprising a fusion protein, or a polynucleotide encoding a fusion protein, in combination with a physiologically acceptable carrier are provided.

Vaccines are further provided, within other aspects, that comprise a fusion protein, or a polynucleotide encoding a fusion protein, in combination with a non-specific immune response enhancer.

Within further aspects, the present invention provides methods for inhibiting the development of a cancer in a patient, comprising administering to a patient a pharmaceutical composition or vaccine as recited above.

The present invention further provides, within other aspects, methods for removing tumor cells from a biological sample, comprising contacting a biological sample with T cells that specifically react with a prostate tumor protein, wherein the step of contacting is performed under conditions and for a time sufficient to permit the removal of cells expressing the protein from the sample.

Within related aspects, methods are provided for inhibiting the development of a cancer in a patient, comprising administering to a patient a biological sample treated as described above.

Methods are further provided, within other aspects, for stimulating and/or expanding T cells specific for a prostate tumor protein, comprising contacting T cells with one or more of: (i) a polypeptide as described above; (ii) a polynucleotide encoding such a polypeptide; and/or (iii) an antigen presenting cell that expresses such a polypeptide; under conditions and for a time sufficient to permit the stimulation and/or expansion of T cells. Isolated T cell populations comprising T cells prepared as described above are also provided.

Within further aspects, the present invention provides methods for inhibiting the development of a cancer in a patient, comprising administering to a patient an effective amount of a T cell population as described above.

The present invention further provides methods for inhibiting the development of a cancer in a patient, comprising the steps of: (a) incubating CD4⁺ and/or CD8⁺ T cells isolated from a patient with one or more of: (i) a polypeptide comprising at least an immunogenic portion of a prostate tumor protein; (ii) a polynucleotide encoding such a polypeptide; and (iii) an antigen-presenting cell that expressed such a polypeptide; and (b) administering to the patient an effective amount of the proliferated T cells, and thereby inhibiting the development of a cancer in the patient. Proliferated cells may, but need not, be cloned prior to administration to the patient.

Within further aspects, the present invention provides methods for determining the presence or absence of a cancer in a patient, comprising: (a) contacting a biological sample obtained from a patient with a binding agent that binds to a polypeptide as recited

above; (b) detecting in the sample an amount of polypeptide that binds to the binding agent; and (c) comparing the amount of polypeptide with a predetermined cut-off value, and therefrom determining the presence or absence of a cancer in the patient. Within preferred embodiments, the binding agent is an antibody, more preferably a monoclonal antibody. The cancer may be prostate cancer.

The present invention also provides, within other aspects, methods for monitoring the progression of a cancer in a patient. Such methods comprise the steps of: (a) contacting a biological sample obtained from a patient at a first point in time with a binding agent that binds to a polypeptide as recited above; (b) detecting in the sample an amount of polypeptide that binds to the binding agent; (c) repeating steps (a) and (b) using a biological sample obtained from the patient at a subsequent point in time; and (d) comparing the amount of polypeptide detected in step (c) with the amount detected in step (b) and therefrom monitoring the progression of the cancer in the patient.

The present invention further provides, within other aspects, methods for determining the presence or absence of a cancer in a patient, comprising the steps of: (a) contacting a biological sample obtained from a patient with an oligonucleotide that hybridizes to a polynucleotide that encodes a prostate tumor protein; (b) detecting in the sample a level of a polynucleotide, preferably mRNA, that hybridizes to the oligonucleotide; and (c) comparing the level of polynucleotide that hybridizes to the oligonucleotide with a predetermined cut-off value, and therefrom determining the presence or absence of a cancer in the patient. Within certain embodiments, the amount of mRNA is detected via polymerase chain reaction using, for example, at least one oligonucleotide primer that hybridizes to a polynucleotide encoding a polypeptide as recited above, or a complement of such a polynucleotide. Within other embodiments, the amount of mRNA is detected using a hybridization technique, employing an oligonucleotide probe that hybridizes to a polynucleotide that encodes a polypeptide as recited above, or a complement of such a polynucleotide.

In related aspects, methods are provided for monitoring the progression of a cancer in a patient, comprising the steps of: (a) contacting a biological sample obtained from a patient with an oligonucleotide that hybridizes to a polynucleotide that encodes a prostate tumor protein; (b) detecting in the sample an amount of a polynucleotide that hybridizes to the oligonucleotide; (c) repeating steps (a) and (b) using a biological sample obtained from the patient at a subsequent point in time; and (d) comparing the amount of polynucleotide detected in step (c) with the amount detected in step (b) and therefrom monitoring the progression of the cancer in the patient.

Within further aspects, the present invention provides antibodies, such as monoclonal antibodies, that bind to a polypeptide as described above, as well as diagnostic

kits comprising such antibodies. Diagnostic kits comprising one or more oligonucleotide probes or primers as described above are also provided.

These and other aspects of the present invention will become apparent upon reference to the following detailed description and attached drawings. All references disclosed herein are hereby incorporated by reference in their entirety as if each was incorporated individually.

BRIEF DESCRIPTION OF THE DRAWINGS AND SEQUENCE IDENTIFIERS

Figure 1 illustrates the ability of T cells to kill fibroblasts expressing the representative prostate tumor polypeptide P502S, as compared to control fibroblasts. The percentage lysis is shown as a series of effector:target ratios, as indicated.

Figures 2A and 2B illustrate the ability of T cells to recognize cells expressing the representative prostate tumor polypeptide P502S. In each case, the number of γ -interferon spots is shown for different numbers of responders. In Figure 2A, data is presented for fibroblasts pulsed with the P2S-12 peptide, as compared to fibroblasts pulsed with a control E75 peptide. In Figure 2B, data is presented for fibroblasts expressing P502S, as compared to fibroblasts expressing HER-2/*neu*.

Figure 3 represents a peptide competition binding assay showing that the P1S#10 peptide, derived from P501S, binds HLA-A2. Peptide P1S#10 inhibits HLA-A2 restricted presentation of fluM58 peptide to CTL clone D150M58 in TNF release bioassay. D150M58 CTL is specific for the HLA-A2 binding influenza matrix peptide fluM58.

Figure 4 illustrates the ability of T cell lines generated from P1S#10 immunized mice to specifically lyse P1S#10-pulsed Jurkat A2Kb targets and P501S-transduced Jurkat A2Kb targets, as compared to EGFP-transduced Jurkat A2Kb. The percent lysis is shown as a series of effector to target ratios, as indicated.

Figure 5 illustrates the ability of a T cell clone to recognize and specifically lyse Jurkat A2Kb cells expressing the representative prostate tumor polypeptide P501S, thereby demonstrating that the P1S#10 peptide may be a naturally processed epitope of the P501S polypeptide.

Figures 6A and 6B are graphs illustrating the specificity of a CD8⁺ cell line (3A-1) for a representative prostate tumor antigen (P501S). Figure 6A shows the results of a ⁵¹Cr release assay. The percent specific lysis is shown as a series of effector:target ratios, as indicated. Figure 6B shows the production of interferon-gamma by 3A-1 cells stimulated with autologous B-LCL transduced with P501S, at varying effector:target ratios as indicated.

SEQ ID NO: 1 is the determined cDNA sequence for F1-13

SEQ ID NO: 2 is the determined 3' cDNA sequence for F1-12

SEQ ID NO: 3 is the determined 5' cDNA sequence for F1-12
SEQ ID NO: 4 is the determined 3' cDNA sequence for F1-16
SEQ ID NO: 5 is the determined 3' cDNA sequence for H1-1
SEQ ID NO: 6 is the determined 3' cDNA sequence for H1-9
SEQ ID NO: 7 is the determined 3' cDNA sequence for H1-4
SEQ ID NO: 8 is the determined 3' cDNA sequence for J1-17
SEQ ID NO: 9 is the determined 5' cDNA sequence for J1-17
SEQ ID NO: 10 is the determined 3' cDNA sequence for L1-12
SEQ ID NO: 11 is the determined 5' cDNA sequence for L1-12
SEQ ID NO: 12 is the determined 3' cDNA sequence for N1-1862
SEQ ID NO: 13 is the determined 5' cDNA sequence for N1-1862
SEQ ID NO: 14 is the determined 3' cDNA sequence for J1-13
SEQ ID NO: 15 is the determined 5' cDNA sequence for J1-13
SEQ ID NO: 16 is the determined 3' cDNA sequence for J1-19
SEQ ID NO: 17 is the determined 5' cDNA sequence for J1-19
SEQ ID NO: 18 is the determined 3' cDNA sequence for J1-25
SEQ ID NO: 19 is the determined 5' cDNA sequence for J1-25
SEQ ID NO: 20 is the determined 5' cDNA sequence for J1-24
SEQ ID NO: 21 is the determined 3' cDNA sequence for J1-24
SEQ ID NO: 22 is the determined 5' cDNA sequence for K1-58
SEQ ID NO: 23 is the determined 3' cDNA sequence for K1-58
SEQ ID NO: 24 is the determined 5' cDNA sequence for K1-63
SEQ ID NO: 25 is the determined 3' cDNA sequence for K1-63
SEQ ID NO: 26 is the determined 5' cDNA sequence for L1-4
SEQ ID NO: 27 is the determined 3' cDNA sequence for L1-4
SEQ ID NO: 28 is the determined 5' cDNA sequence for L1-14
SEQ ID NO: 29 is the determined 3' cDNA sequence for L1-14
SEQ ID NO: 30 is the determined 3' cDNA sequence for J1-12
SEQ ID NO: 31 is the determined 3' cDNA sequence for J1-16
SEQ ID NO: 32 is the determined 3' cDNA sequence for J1-21
SEQ ID NO: 33 is the determined 3' cDNA sequence for K1-48
SEQ ID NO: 34 is the determined 3' cDNA sequence for K1-55
SEQ ID NO: 35 is the determined 3' cDNA sequence for L1-2
SEQ ID NO: 36 is the determined 3' cDNA sequence for L1-6
SEQ ID NO: 37 is the determined 3' cDNA sequence for N1-1858
SEQ ID NO: 38 is the determined 3' cDNA sequence for N1-1860
SEQ ID NO: 39 is the determined 3' cDNA sequence for N1-1861

SEQ ID NO: 40 is the determined 3' cDNA sequence for N1-1864
SEQ ID NO: 41 is the determined cDNA sequence for P5
SEQ ID NO: 42 is the determined cDNA sequence for P8
SEQ ID NO: 43 is the determined cDNA sequence for P9
SEQ ID NO: 44 is the determined cDNA sequence for P18
SEQ ID NO: 45 is the determined cDNA sequence for P20
SEQ ID NO: 46 is the determined cDNA sequence for P29
SEQ ID NO: 47 is the determined cDNA sequence for P30
SEQ ID NO: 48 is the determined cDNA sequence for P34
SEQ ID NO: 49 is the determined cDNA sequence for P36
SEQ ID NO: 50 is the determined cDNA sequence for P38
SEQ ID NO: 51 is the determined cDNA sequence for P39
SEQ ID NO: 52 is the determined cDNA sequence for P42
SEQ ID NO: 53 is the determined cDNA sequence for P47
SEQ ID NO: 54 is the determined cDNA sequence for P49
SEQ ID NO: 55 is the determined cDNA sequence for P50
SEQ ID NO: 56 is the determined cDNA sequence for P53
SEQ ID NO: 57 is the determined cDNA sequence for P55
SEQ ID NO: 58 is the determined cDNA sequence for P60
SEQ ID NO: 59 is the determined cDNA sequence for P64
SEQ ID NO: 60 is the determined cDNA sequence for P65
SEQ ID NO: 61 is the determined cDNA sequence for P73
SEQ ID NO: 62 is the determined cDNA sequence for P75
SEQ ID NO: 63 is the determined cDNA sequence for P76
SEQ ID NO: 64 is the determined cDNA sequence for P79
SEQ ID NO: 65 is the determined cDNA sequence for P84
SEQ ID NO: 66 is the determined cDNA sequence for P68
SEQ ID NO: 67 is the determined cDNA sequence for P80
SEQ ID NO: 68 is the determined cDNA sequence for P82
SEQ ID NO: 69 is the determined cDNA sequence for U1-3064
SEQ ID NO: 70 is the determined cDNA sequence for U1-3065
SEQ ID NO: 71 is the determined cDNA sequence for V1-3692
SEQ ID NO: 72 is the determined cDNA sequence for 1A-3905
SEQ ID NO: 73 is the determined cDNA sequence for V1-3686
SEQ ID NO: 74 is the determined cDNA sequence for R1-2330
SEQ ID NO: 75 is the determined cDNA sequence for 1B-3976
SEQ ID NO: 76 is the determined cDNA sequence for V1-3679

SEQ ID NO: 77 is the determined cDNA sequence for 1G-4736
SEQ ID NO: 78 is the determined cDNA sequence for 1G-4738
SEQ ID NO: 79 is the determined cDNA sequence for 1G-4741
SEQ ID NO: 80 is the determined cDNA sequence for 1G-4744
SEQ ID NO: 81 is the determined cDNA sequence for 1G-4734
SEQ ID NO: 82 is the determined cDNA sequence for 1H-4774
SEQ ID NO: 83 is the determined cDNA sequence for 1H-4781
SEQ ID NO: 84 is the determined cDNA sequence for 1H-4785
SEQ ID NO: 85 is the determined cDNA sequence for 1H-4787
SEQ ID NO: 86 is the determined cDNA sequence for 1H-4796
SEQ ID NO: 87 is the determined cDNA sequence for 1I-4807
SEQ ID NO: 88 is the determined cDNA sequence for 1I-4810
SEQ ID NO: 89 is the determined cDNA sequence for 1I-4811
SEQ ID NO: 90 is the determined cDNA sequence for 1J-4876
SEQ ID NO: 91 is the determined cDNA sequence for 1K-4884
SEQ ID NO: 92 is the determined cDNA sequence for 1K-4896
SEQ ID NO: 93 is the determined cDNA sequence for 1G-4761
SEQ ID NO: 94 is the determined cDNA sequence for 1G-4762
SEQ ID NO: 95 is the determined cDNA sequence for 1H-4766
SEQ ID NO: 96 is the determined cDNA sequence for 1H-4770
SEQ ID NO: 97 is the determined cDNA sequence for 1H-4771
SEQ ID NO: 98 is the determined cDNA sequence for 1H-4772
SEQ ID NO: 99 is the determined cDNA sequence for 1D-4297
SEQ ID NO: 100 is the determined cDNA sequence for 1D-4309
SEQ ID NO: 101 is the determined cDNA sequence for 1D.1-4278
SEQ ID NO: 102 is the determined cDNA sequence for 1D-4288
SEQ ID NO: 103 is the determined cDNA sequence for 1D-4283
SEQ ID NO: 104 is the determined cDNA sequence for 1D-4304
SEQ ID NO: 105 is the determined cDNA sequence for 1D-4296
SEQ ID NO: 106 is the determined cDNA sequence for 1D-4280
SEQ ID NO: 107 is the determined full length cDNA sequence for F1-12 (also referred to as P504S)
SEQ ID NO: 108 is the predicted amino acid sequence for F1-12
SEQ ID NO: 109 is the determined full length cDNA sequence for J1-17
SEQ ID NO: 110 is the determined full length cDNA sequence for L1-12
SEQ ID NO: 111 is the determined full length cDNA sequence for N1-1862
SEQ ID NO: 112 is the predicted amino acid sequence for J1-17

SEQ ID NO: 113 is the predicted amino acid sequence for L1-12
SEQ ID NO: 114 is the predicted amino acid sequence for N1-1862
SEQ ID NO: 115 is the determined cDNA sequence for P89
SEQ ID NO: 116 is the determined cDNA sequence for P90
SEQ ID NO: 117 is the determined cDNA sequence for P92
SEQ ID NO: 118 is the determined cDNA sequence for P95
SEQ ID NO: 119 is the determined cDNA sequence for P98
SEQ ID NO: 120 is the determined cDNA sequence for P102
SEQ ID NO: 121 is the determined cDNA sequence for P110
SEQ ID NO: 122 is the determined cDNA sequence for P111
SEQ ID NO: 123 is the determined cDNA sequence for P114
SEQ ID NO: 124 is the determined cDNA sequence for P115
SEQ ID NO: 125 is the determined cDNA sequence for P116
SEQ ID NO: 126 is the determined cDNA sequence for P124
SEQ ID NO: 127 is the determined cDNA sequence for P126
SEQ ID NO: 128 is the determined cDNA sequence for P130
SEQ ID NO: 129 is the determined cDNA sequence for P133
SEQ ID NO: 130 is the determined cDNA sequence for P138
SEQ ID NO: 131 is the determined cDNA sequence for P143
SEQ ID NO: 132 is the determined cDNA sequence for P151
SEQ ID NO: 133 is the determined cDNA sequence for P156
SEQ ID NO: 134 is the determined cDNA sequence for P157
SEQ ID NO: 135 is the determined cDNA sequence for P166
SEQ ID NO: 136 is the determined cDNA sequence for P176
SEQ ID NO: 137 is the determined cDNA sequence for P178
SEQ ID NO: 138 is the determined cDNA sequence for P179
SEQ ID NO: 139 is the determined cDNA sequence for P185
SEQ ID NO: 140 is the determined cDNA sequence for P192
SEQ ID NO: 141 is the determined cDNA sequence for P201
SEQ ID NO: 142 is the determined cDNA sequence for P204
SEQ ID NO: 143 is the determined cDNA sequence for P208
SEQ ID NO: 144 is the determined cDNA sequence for P211
SEQ ID NO: 145 is the determined cDNA sequence for P213
SEQ ID NO: 146 is the determined cDNA sequence for P219
SEQ ID NO: 147 is the determined cDNA sequence for P237
SEQ ID NO: 148 is the determined cDNA sequence for P239
SEQ ID NO: 149 is the determined cDNA sequence for P248

SEQ ID NO: 150 is the determined cDNA sequence for P251
SEQ ID NO: 151 is the determined cDNA sequence for P255
SEQ ID NO: 152 is the determined cDNA sequence for P256
SEQ ID NO: 153 is the determined cDNA sequence for P259
SEQ ID NO: 154 is the determined cDNA sequence for P260
SEQ ID NO: 155 is the determined cDNA sequence for P263
SEQ ID NO: 156 is the determined cDNA sequence for P264
SEQ ID NO: 157 is the determined cDNA sequence for P266
SEQ ID NO: 158 is the determined cDNA sequence for P270
SEQ ID NO: 159 is the determined cDNA sequence for P272
SEQ ID NO: 160 is the determined cDNA sequence for P278
SEQ ID NO: 161 is the determined cDNA sequence for P105
SEQ ID NO: 162 is the determined cDNA sequence for P107
SEQ ID NO: 163 is the determined cDNA sequence for P137
SEQ ID NO: 164 is the determined cDNA sequence for P194
SEQ ID NO: 165 is the determined cDNA sequence for P195
SEQ ID NO: 166 is the determined cDNA sequence for P196
SEQ ID NO: 167 is the determined cDNA sequence for P220
SEQ ID NO: 168 is the determined cDNA sequence for P234
SEQ ID NO: 169 is the determined cDNA sequence for P235
SEQ ID NO: 170 is the determined cDNA sequence for P243
SEQ ID NO: 171 is the determined cDNA sequence for P703P-DE1
SEQ ID NO: 172 is the predicted amino acid sequence for P703P-DE1
SEQ ID NO: 173 is the determined cDNA sequence for P703P-DE2
SEQ ID NO: 174 is the determined cDNA sequence for P703P-DE6
SEQ ID NO: 175 is the determined cDNA sequence for P703P-DE13
SEQ ID NO: 176 is the predicted amino acid sequence for P703P-DE13
SEQ ID NO: 177 is the determined cDNA sequence for P703P-DE14
SEQ ID NO: 178 is the predicted amino acid sequence for P703P-DE14
SEQ ID NO: 179 is the determined extended cDNA sequence for 1G-4736
SEQ ID NO: 180 is the determined extended cDNA sequence for 1G-4738
SEQ ID NO: 181 is the determined extended cDNA sequence for 1G-4741
SEQ ID NO: 182 is the determined extended cDNA sequence for 1G-4744
SEQ ID NO: 183 is the determined extended cDNA sequence for 1H-4774
SEQ ID NO: 184 is the determined extended cDNA sequence for 1H-4781
SEQ ID NO: 185 is the determined extended cDNA sequence for 1H-4785
SEQ ID NO: 186 is the determined extended cDNA sequence for 1H-4787

SEQ ID NO: 187 is the determined extended cDNA sequence for 1H-4796
SEQ ID NO: 188 is the determined extended cDNA sequence for 1I-4807
SEQ ID NO: 189 is the determined 3' cDNA sequence for 1I-4810
SEQ ID NO: 190 is the determined 3' cDNA sequence for 1I-4811
SEQ ID NO: 191 is the determined extended cDNA sequence for 1J-4876
SEQ ID NO: 192 is the determined extended cDNA sequence for 1K-4884
SEQ ID NO: 193 is the determined extended cDNA sequence for 1K-4896
SEQ ID NO: 194 is the determined extended cDNA sequence for 1G-4761
SEQ ID NO: 195 is the determined extended cDNA sequence for 1G-4762
SEQ ID NO: 196 is the determined extended cDNA sequence for 1H-4766
SEQ ID NO: 197 is the determined 3' cDNA sequence for 1H-4770
SEQ ID NO: 198 is the determined 3' cDNA sequence for 1H-4771
SEQ ID NO: 199 is the determined extended cDNA sequence for 1H-4772
SEQ ID NO: 200 is the determined extended cDNA sequence for 1D-4309
SEQ ID NO: 201 is the determined extended cDNA sequence for 1D.1-4278
SEQ ID NO: 202 is the determined extended cDNA sequence for 1D-4288
SEQ ID NO: 203 is the determined extended cDNA sequence for 1D-4283
SEQ ID NO: 204 is the determined extended cDNA sequence for 1D-4304
SEQ ID NO: 205 is the determined extended cDNA sequence for 1D-4296
SEQ ID NO: 206 is the determined extended cDNA sequence for 1D-4280
SEQ ID NO: 207 is the determined cDNA sequence for 10-d8fwd
SEQ ID NO: 208 is the determined cDNA sequence for 10-H10con
SEQ ID NO: 209 is the determined cDNA sequence for 11-C8rev
SEQ ID NO: 210 is the determined cDNA sequence for 7.g6fwd
SEQ ID NO: 211 is the determined cDNA sequence for 7.g6rev
SEQ ID NO: 212 is the determined cDNA sequence for 8-b5fwd
SEQ ID NO: 213 is the determined cDNA sequence for 8-b5rev
SEQ ID NO: 214 is the determined cDNA sequence for 8-b6fwd
SEQ ID NO: 215 is the determined cDNA sequence for 8-b6 rev
SEQ ID NO: 216 is the determined cDNA sequence for 8-d4fwd
SEQ ID NO: 217 is the determined cDNA sequence for 8-d9rev
SEQ ID NO: 218 is the determined cDNA sequence for 8-g3fwd
SEQ ID NO: 219 is the determined cDNA sequence for 8-g3rev
SEQ ID NO: 220 is the determined cDNA sequence for 8-h11rev
SEQ ID NO: 221 is the determined cDNA sequence for g-f12fwd
SEQ ID NO: 222 is the determined cDNA sequence for g-f3rev
SEQ ID NO: 223 is the determined cDNA sequence for P509S

SEQ ID NO: 224 is the determined cDNA sequence for P510S
SEQ ID NO: 225 is the determined cDNA sequence for P703DE5
SEQ ID NO: 226 is the determined cDNA sequence for 9-A11
SEQ ID NO: 227 is the determined cDNA sequence for 8-C6
SEQ ID NO: 228 is the determined cDNA sequence for 8-H7
SEQ ID NO: 229 is the determined cDNA sequence for JPTPN13
SEQ ID NO: 230 is the determined cDNA sequence for JPTPN14
SEQ ID NO: 231 is the determined cDNA sequence for JPTPN23
SEQ ID NO: 232 is the determined cDNA sequence for JPTPN24
SEQ ID NO: 233 is the determined cDNA sequence for JPTPN25
SEQ ID NO: 234 is the determined cDNA sequence for JPTPN30
SEQ ID NO: 235 is the determined cDNA sequence for JPTPN34
SEQ ID NO: 236 is the determined cDNA sequence for PTPN35
SEQ ID NO: 237 is the determined cDNA sequence for JPTPN36
SEQ ID NO: 238 is the determined cDNA sequence for JPTPN38
SEQ ID NO: 239 is the determined cDNA sequence for JPTPN39
SEQ ID NO: 240 is the determined cDNA sequence for JPTPN40
SEQ ID NO: 241 is the determined cDNA sequence for JPTPN41
SEQ ID NO: 242 is the determined cDNA sequence for JPTPN42
SEQ ID NO: 243 is the determined cDNA sequence for JPTPN45
SEQ ID NO: 244 is the determined cDNA sequence for JPTPN46
SEQ ID NO: 245 is the determined cDNA sequence for JPTPN51
SEQ ID NO: 246 is the determined cDNA sequence for JPTPN56
SEQ ID NO: 247 is the determined cDNA sequence for PTPN64
SEQ ID NO: 248 is the determined cDNA sequence for JPTPN65
SEQ ID NO: 249 is the determined cDNA sequence for JPTPN67
SEQ ID NO: 250 is the determined cDNA sequence for JPTPN76
SEQ ID NO: 251 is the determined cDNA sequence for JPTPN84
SEQ ID NO: 252 is the determined cDNA sequence for JPTPN85
SEQ ID NO: 253 is the determined cDNA sequence for JPTPN86
SEQ ID NO: 254 is the determined cDNA sequence for JPTPN87
SEQ ID NO: 255 is the determined cDNA sequence for JPTPN88
SEQ ID NO: 256 is the determined cDNA sequence for JP1F1
SEQ ID NO: 257 is the determined cDNA sequence for JP1F2
SEQ ID NO: 258 is the determined cDNA sequence for JP1C2
SEQ ID NO: 259 is the determined cDNA sequence for JP1B1
SEQ ID NO: 260 is the determined cDNA sequence for JP1B2

SEQ ID NO: 261 is the determined cDNA sequence for JP1D3
SEQ ID NO: 262 is the determined cDNA sequence for JP1A4
SEQ ID NO: 263 is the determined cDNA sequence for JP1F5
SEQ ID NO: 264 is the determined cDNA sequence for JP1E6
SEQ ID NO: 265 is the determined cDNA sequence for JP1D6
SEQ ID NO: 266 is the determined cDNA sequence for JP1B5
SEQ ID NO: 267 is the determined cDNA sequence for JP1A6
SEQ ID NO: 268 is the determined cDNA sequence for JP1E8
SEQ ID NO: 269 is the determined cDNA sequence for JP1D7
SEQ ID NO: 270 is the determined cDNA sequence for JP1D9
SEQ ID NO: 271 is the determined cDNA sequence for JP1C10
SEQ ID NO: 272 is the determined cDNA sequence for JP1A9
SEQ ID NO: 273 is the determined cDNA sequence for JP1F12
SEQ ID NO: 274 is the determined cDNA sequence for JP1E12
SEQ ID NO: 275 is the determined cDNA sequence for JP1D11
SEQ ID NO: 276 is the determined cDNA sequence for JP1C11
SEQ ID NO: 277 is the determined cDNA sequence for JP1C12
SEQ ID NO: 278 is the determined cDNA sequence for JP1B12
SEQ ID NO: 279 is the determined cDNA sequence for JP1A12
SEQ ID NO: 280 is the determined cDNA sequence for JP8G2
SEQ ID NO: 281 is the determined cDNA sequence for JP8H1
SEQ ID NO: 282 is the determined cDNA sequence for JP8H2
SEQ ID NO: 283 is the determined cDNA sequence for JP8A3
SEQ ID NO: 284 is the determined cDNA sequence for JP8A4
SEQ ID NO: 285 is the determined cDNA sequence for JP8C3
SEQ ID NO: 286 is the determined cDNA sequence for JP8G4
SEQ ID NO: 287 is the determined cDNA sequence for JP8B6
SEQ ID NO: 288 is the determined cDNA sequence for JP8D6
SEQ ID NO: 289 is the determined cDNA sequence for JP8F5
SEQ ID NO: 290 is the determined cDNA sequence for JP8A8
SEQ ID NO: 291 is the determined cDNA sequence for JP8C7
SEQ ID NO: 292 is the determined cDNA sequence for JP8D7
SEQ ID NO: 293 is the determined cDNA sequence for P8D8
SEQ ID NO: 294 is the determined cDNA sequence for JP8E7
SEQ ID NO: 295 is the determined cDNA sequence for JP8F8
SEQ ID NO: 296 is the determined cDNA sequence for JP8G8
SEQ ID NO: 297 is the determined cDNA sequence for JP8B10

SEQ ID NO: 298 is the determined cDNA sequence for JP8C10
SEQ ID NO: 299 is the determined cDNA sequence for JP8E9
SEQ ID NO: 300 is the determined cDNA sequence for JP8E10
SEQ ID NO: 301 is the determined cDNA sequence for JP8F9
SEQ ID NO: 302 is the determined cDNA sequence for JP8H9
SEQ ID NO: 303 is the determined cDNA sequence for JP8C12
SEQ ID NO: 304 is the determined cDNA sequence for JP8E11
SEQ ID NO: 305 is the determined cDNA sequence for JP8E12
SEQ ID NO: 306 is the amino acid sequence for the peptide PS2#12
SEQ ID NO: 307 is the determined cDNA sequence for P711P
SEQ ID NO: 308 is the determined cDNA sequence for P712P
SEQ ID NO: 309 is the determined cDNA sequence for CLONE23
SEQ ID NO: 310 is the determined cDNA sequence for P774P
SEQ ID NO: 311 is the determined cDNA sequence for P775P
SEQ ID NO: 312 is the determined cDNA sequence for P715P
SEQ ID NO: 313 is the determined cDNA sequence for P710P
SEQ ID NO: 314 is the determined cDNA sequence for P767P
SEQ ID NO: 315 is the determined cDNA sequence for P768P
SEQ ID NO: 316-325 are the determined cDNA sequences of previously isolated genes
SEQ ID NO: 326 is the determined cDNA sequence for P703PDE5
SEQ ID NO: 327 is the predicted amino acid sequence for P703PDE5
SEQ ID NO: 328 is the determined cDNA sequence for P703P6.26
SEQ ID NO: 329 is the predicted amino acid sequence for P703P6.26
SEQ ID NO: 330 is the determined cDNA sequence for P703PX-23
SEQ ID NO: 331 is the predicted amino acid sequence for P703PX-23
SEQ ID NO: 332 is the determined full length cDNA sequence for P509S
SEQ ID NO: 333 is the determined extended cDNA sequence for P707P (also referred to as 11-C9)
SEQ ID NO: 334 is the determined cDNA sequence for P714P
SEQ ID NO: 335 is the determined cDNA sequence for P705P (also referred to as 9-F3)
SEQ ID NO: 336 is the predicted amino acid sequence for P705P
SEQ ID NO: 337 is the amino acid sequence of the peptide P1S#10
SEQ ID NO: 338 is the amino acid sequence of the peptide p5
SEQ ID NO: 339 is the predicted amino acid sequence of P509S
SEQ ID NO: 340 is the determined cDNA sequence for P778P
SEQ ID NO: 341 is the determined cDNA sequence for P786P
SEQ ID NO: 342 is the determined cDNA sequence for P789P

SEQ ID NO: 343 is the determined cDNA sequence for a clone showing homology to Homo sapiens MM46 mRNA

SEQ ID NO: 344 is the determined cDNA sequence for a clone showing homology to Homo sapiens TNF-alpha stimulated ABC protein (ABC50) mRNA

SEQ ID NO: 345 is the determined cDNA sequence for a clone showing homology to Homo sapiens mRNA for E-cadherin

SEQ ID NO: 346 is the determined cDNA sequence for a clone showing homology to Human nuclear-encoded mitochondrial serine hydroxymethyltransferase (SHMT)

SEQ ID NO: 347 is the determined cDNA sequence for a clone showing homology to Homo sapiens natural resistance-associated macrophage protein2 (NRAMP2)

SEQ ID NO: 348 is the determined cDNA sequence for a clone showing homology to Homo sapiens phosphoglucomutase-related protein (PGMRP)

SEQ ID NO: 349 is the determined cDNA sequence for a clone showing homology to Human mRNA for proteosome subunit p40

SEQ ID NO: 350 is the determined cDNA sequence for P777P

SEQ ID NO: 351 is the determined cDNA sequence for P779P

SEQ ID NO: 352 is the determined cDNA sequence for P790P

SEQ ID NO: 353 is the determined cDNA sequence for P784P

SEQ ID NO: 354 is the determined cDNA sequence for P776P

SEQ ID NO: 355 is the determined cDNA sequence for P780P

SEQ ID NO: 356 is the determined cDNA sequence for P544S

SEQ ID NO: 357 is the determined cDNA sequence for P745S

SEQ ID NO: 358 is the determined cDNA sequence for P782P

SEQ ID NO: 359 is the determined cDNA sequence for P783P

SEQ ID NO: 360 is the determined cDNA sequence for unknown 17984

SEQ ID NO: 361 is the determined cDNA sequence for P787P

SEQ ID NO: 362 is the determined cDNA sequence for P788P

SEQ ID NO: 363 is the determined cDNA sequence for unknown 17994

SEQ ID NO: 364 is the determined cDNA sequence for P781P

SEQ ID NO: 365 is the determined cDNA sequence for P785P

SEQ ID NO: 366-375 are the determined cDNA sequences for splice variants of B305D.

SEQ ID NO: 376 is the predicted amino acid sequence encoded by the sequence of SEQ ID NO: 366.

SEQ ID NO: 377 is the predicted amino acid sequence encoded by the sequence of SEQ ID NO: 372.

SEQ ID NO: 378 is the predicted amino acid sequence encoded by the sequence of SEQ ID NO: 373.

SEQ ID NO: 379 is the predicted amino acid sequence encoded by the sequence of SEQ ID NO: 374.

SEQ ID NO: 380 is the predicted amino acid sequence encoded by the sequence of SEQ ID NO: 375.

SEQ ID NO: 381 is the determined cDNA sequence for B716P.

SEQ ID NO: 382 is the determined full-length cDNA sequence for P711P.

SEQ ID NO: 383 is the predicted amino acid sequence for P711P.

SEQ ID NO: 384 is the cDNA sequence for P1000C.

SEQ ID NO: 385 is the cDNA sequence for CGI-82.

SEQ ID NO:386 is the cDNA sequence for 23320.

SEQ ID NO:387 is the cDNA sequence for CGI-69.

SEQ ID NO:388 is the cDNA sequence for L-iditol-2-dehydrogenase.

SEQ ID NO:389 is the cDNA sequence for 23379.

SEQ ID NO:390 is the cDNA sequence for 23381.

SEQ ID NO:391 is the cDNA sequence for KIAA0122.

SEQ ID NO:392 is the cDNA sequence for 23399.

SEQ ID NO:393 is the cDNA sequence for a previously identified gene.

SEQ ID NO:394 is the cDNA sequence for HCLBP.

SEQ ID NO:395 is the cDNA sequence for transglutaminase.

SEQ ID NO:396 is the cDNA sequence for a previously identified gene.

SEQ ID NO:397 is the cDNA sequence for PAP.

SEQ ID NO:398 is the cDNA sequence for Ets transcription factor PDEF.

SEQ ID NO:399 is the cDNA sequence for hTGR.

SEQ ID NO:400 is the cDNA sequence for KIAA0295.

SEQ ID NO:401 is the cDNA sequence for 22545.

SEQ ID NO:402 is the cDNA sequence for 22547.

SEQ ID NO:403 is the cDNA sequence for 22548.

SEQ ID NO:404 is the cDNA sequence for 22550.

SEQ ID NO:405 is the cDNA sequence for 22551.

SEQ ID NO:406 is the cDNA sequence for 22552.

SEQ ID NO:407 is the cDNA sequence for 22553.

SEQ ID NO:408 is the cDNA sequence for 22558.

SEQ ID NO:409 is the cDNA sequence for 22562.

SEQ ID NO:410 is the cDNA sequence for 22565.

SEQ ID NO:411 is the cDNA sequence for 22567.

SEQ ID NO:412 is the cDNA sequence for 22568.

SEQ ID NO:413 is the cDNA sequence for 22570.

SEQ ID NO:414 is the cDNA sequence for 22571.
SEQ ID NO:415 is the cDNA sequence for 22572.
SEQ ID NO:416 is the cDNA sequence for 22573.
SEQ ID NO:417 is the cDNA sequence for 22573.
SEQ ID NO:418 is the cDNA sequence for 22575.
SEQ ID NO:419 is the cDNA sequence for 22580.
SEQ ID NO:420 is the cDNA sequence for 22581.
SEQ ID NO:421 is the cDNA sequence for 22582.
SEQ ID NO:422 is the cDNA sequence for 22583.
SEQ ID NO:423 is the cDNA sequence for 22584.
SEQ ID NO:424 is the cDNA sequence for 22585.
SEQ ID NO:425 is the cDNA sequence for 22586.
SEQ ID NO:426 is the cDNA sequence for 22587.
SEQ ID NO:427 is the cDNA sequence for 22588.
SEQ ID NO:428 is the cDNA sequence for 22589.
SEQ ID NO:429 is the cDNA sequence for 22590.
SEQ ID NO:430 is the cDNA sequence for 22591.
SEQ ID NO:431 is the cDNA sequence for 22592.
SEQ ID NO:432 is the cDNA sequence for 22593.
SEQ ID NO:433 is the cDNA sequence for 22594.
SEQ ID NO:434 is the cDNA sequence for 22595.
SEQ ID NO:435 is the cDNA sequence for 22596.
SEQ ID NO:436 is the cDNA sequence for 22847.
SEQ ID NO:437 is the cDNA sequence for 22848.
SEQ ID NO:438 is the cDNA sequence for 22849.
SEQ ID NO:439 is the cDNA sequence for 22851.
SEQ ID NO:440 is the cDNA sequence for 22852.
SEQ ID NO:441 is the cDNA sequence for 22853.
SEQ ID NO:442 is the cDNA sequence for 22854.
SEQ ID NO:443 is the cDNA sequence for 22855.
SEQ ID NO:444 is the cDNA sequence for 22856.
SEQ ID NO:445 is the cDNA sequence for 22857.
SEQ ID NO:446 is the cDNA sequence for 23601.
SEQ ID NO:447 is the cDNA sequence for 23602.
SEQ ID NO:448 is the cDNA sequence for 23605.
SEQ ID NO:449 is the cDNA sequence for 23606.
SEQ ID NO:450 is the cDNA sequence for 23612.

SEQ ID NO:451 is the cDNA sequence for 23614.
SEQ ID NO:452 is the cDNA sequence for 23618.
SEQ ID NO:453 is the cDNA sequence for 23622.
SEQ ID NO:454 is the cDNA sequence for folate hydrolase.
SEQ ID NO:455 is the cDNA sequence for LIM protein.
SEQ ID NO:456 is the cDNA sequence for a known gene.
SEQ ID NO:457 is the cDNA sequence for a known gene.
SEQ ID NO:458 is the cDNA sequence for a previously identified gene.
SEQ ID NO:459 is the cDNA sequence for 23045.
SEQ ID NO:460 is the cDNA sequence for 23032.
SEQ ID NO:461 is the cDNA sequence for 23054.
SEQ ID NOs:462-467 are cDNA sequences for known genes.
SEQ ID NOs:468-471 are cDNA sequences for P710P.
SEQ ID NO:472 is a cDNA sequence for P1001C.

DETAILED DESCRIPTION OF THE INVENTION

As noted above, the present invention is generally directed to compositions and methods for the therapy and diagnosis of cancer, such as prostate cancer. The compositions described herein may include prostate tumor polypeptides, polynucleotides encoding such polypeptides, binding agents such as antibodies, antigen presenting cells (APCs) and/or immune system cells (*e.g.*, T cells). Polypeptides of the present invention generally comprise at least a portion (such as an immunogenic portion) of a prostate tumor protein or a variant thereof. A "prostate tumor protein" is a protein that is expressed in prostate tumor cells at a level that is at least two fold, and preferably at least five fold, greater than the level of expression in a normal tissue, as determined using a representative assay provided herein. Certain prostate tumor proteins are tumor proteins that react detectably (within an immunoassay, such as an ELISA or Western blot) with antisera of a patient afflicted with prostate cancer. Polynucleotides of the subject invention generally comprise a DNA or RNA sequence that encodes all or a portion of such a polypeptide, or that is complementary to such a sequence. Antibodies are generally immune system proteins, or antigen-binding fragments thereof, that are capable of binding to a polypeptide as described above. Antigen presenting cells include dendritic cells, macrophages, monocytes, fibroblasts and B-cells that express a polypeptide as described above. T cells that may be employed within such compositions are generally T cells that are specific for a polypeptide as described above.

The present invention is based on the discovery of human prostate tumor proteins. Sequences of polynucleotides encoding certain tumor proteins, or portions thereof, are provided in SEQ ID NOs:1-111, 115-171, 173-175, 177, 179-305, 307-315, 326, 328, 330, 332-335, 340-375, 381, 382 or 384-472. Sequences of polypeptides comprising at least a portion of a tumor protein are provided in SEQ ID NOs:112-114, 172, 176, 178, 327, 329, 331, 336, 339, 376-380 and 383.

PROSTATE TUMOR PROTEIN POLYNUCLEOTIDES

Any polynucleotide that encodes a prostate tumor protein or a portion or other variant thereof as described herein is encompassed by the present invention. Preferred polynucleotides comprise at least 15 consecutive nucleotides, preferably at least 30 consecutive nucleotides and more preferably at least 45 consecutive nucleotides, that encode a portion of a prostate tumor protein. More preferably, a polynucleotide encodes an immunogenic portion of a prostate tumor protein. Polynucleotides complementary to any such sequences are also encompassed by the present invention. Polynucleotides may be single-stranded (coding or antisense) or double-stranded, and may be DNA (genomic, cDNA or synthetic) or RNA molecules. RNA molecules include HnRNA molecules, which contain introns and correspond to a DNA molecule in a one-to-one manner, and mRNA molecules, which do not contain introns. Additional coding or non-coding sequences may, but need not, be present within a polynucleotide of the present invention, and a polynucleotide may, but need not, be linked to other molecules and/or support materials.

Polynucleotides may comprise a native sequence (*i.e.*, an endogenous sequence that encodes a prostate tumor protein or a portion thereof) or may comprise a variant of such a sequence. Polynucleotide variants may contain one or more substitutions, additions, deletions and/or insertions such that the immunogenicity of the encoded polypeptide is not diminished, relative to a native tumor protein. The effect on the immunogenicity of the encoded polypeptide may generally be assessed as described herein. Variants preferably exhibit at least about 70% identity, more preferably at least about 80% identity and most preferably at least about 90% identity to a polynucleotide sequence that encodes a native prostate tumor protein or a portion thereof.

Two polynucleotide or polypeptide sequences are said to be "identical" if the sequence of nucleotides or amino acids in the two sequences is the same when aligned for maximum correspondence as described below. Comparisons between two sequences are typically performed by comparing the sequences over a comparison window to identify and compare local regions of sequence similarity. A "comparison window" as used herein, refers to a segment of at least about 20 contiguous positions, usually 30 to about 75, 40 to about 50,

in which a sequence may be compared to a reference sequence of the same number of contiguous positions after the two sequences are optimally aligned.

Optimal alignment of sequences for comparison may be conducted using the Megalign program in the Lasergene suite of bioinformatics software (DNASTAR, Inc., Madison, WI), using default parameters. This program embodies several alignment schemes described in the following references: Dayhoff, M.O. (1978) A model of evolutionary change in proteins – Matrices for detecting distant relationships. In Dayhoff, M.O. (ed.) *Atlas of Protein Sequence and Structure*, National Biomedical Research Foundation, Washington DC Vol. 5, Suppl. 3, pp. 345-358; Hein J. (1990) *Unified Approach to Alignment and Phylogenesis* pp. 626-645 *Methods in Enzymology* vol. 183, Academic Press, Inc., San Diego, CA; Higgins, D.G. and Sharp, P.M. (1989) *CABIOS* 5:151-153; Myers, E.W. and Muller W. (1988) *CABIOS* 4:11-17; Robinson, E.D. (1971) *Comb. Theor* 11:105; Santou, N. Nes, M. (1987) *Mol. Biol. Evol.* 4:406-425; Sneath, P.H.A. and Sokal, R.R. (1973) *Numerical Taxonomy – the Principles and Practice of Numerical Taxonomy*, Freeman Press, San Francisco, CA; Wilbur, W.J. and Lipman, D.J. (1983) *Proc. Natl. Acad., Sci. USA* 80:726-730.

Preferably, the “percentage of sequence identity” is determined by comparing two optimally aligned sequences over a window of comparison of at least 20 positions, wherein the portion of the polynucleotide or polypeptide sequence in the comparison window may comprise additions or deletions (*i.e.*, gaps) of 20 percent or less, usually 5 to 15 percent, or 10 to 12 percent, as compared to the reference sequences (which does not comprise additions or deletions) for optimal alignment of the two sequences. The percentage is calculated by determining the number of positions at which the identical nucleic acid bases or amino acid residue occurs in both sequences to yield the number of matched positions, dividing the number of matched positions by the total number of positions in the reference sequence (*i.e.*, the window size) and multiplying the results by 100 to yield the percentage of sequence identity.

Variants may also, or alternatively, be substantially homologous to a native gene, or a portion or complement thereof. Such polynucleotide variants are capable of hybridizing under moderately stringent conditions to a naturally occurring DNA sequence encoding a native prostate tumor protein (or a complementary sequence). Suitable moderately stringent conditions include prewashing in a solution of 5 X SSC, 0.5% SDS, 1.0 mM EDTA (pH 8.0); hybridizing at 50°C-65°C, 5 X SSC, overnight; followed by washing twice at 65°C for 20 minutes with each of 2X, 0.5X and 0.2X SSC containing 0.1% SDS.

It will be appreciated by those of ordinary skill in the art that, as a result of the degeneracy of the genetic code, there are many nucleotide sequences that encode a polypeptide as described herein. Some of these polynucleotides bear minimal homology to

the nucleotide sequence of any native gene. Nonetheless, polynucleotides that vary due to differences in codon usage are specifically contemplated by the present invention. Further, alleles of the genes comprising the polynucleotide sequences provided herein are within the scope of the present invention. Alleles are endogenous genes that are altered as a result of one or more mutations, such as deletions, additions and/or substitutions of nucleotides. The resulting mRNA and protein may, but need not, have an altered structure or function. Alleles may be identified using standard techniques (such as hybridization, amplification and/or database sequence comparison).

Polynucleotides may be prepared using any of a variety of techniques. For example, a polynucleotide may be identified, as described in more detail below, by screening a microarray of cDNAs for tumor-associated expression (*i.e.*, expression that is at least five fold greater in a prostate tumor than in normal tissue, as determined using a representative assay provided herein). Such screens may be performed using a Synteni microarray (Palo Alto, CA) according to the manufacturer's instructions (and essentially as described by Schena et al., *Proc. Natl. Acad. Sci. USA* 93:10614-10619, 1996 and Heller et al., *Proc. Natl. Acad. Sci. USA* 94:2150-2155, 1997). Alternatively, polypeptides may be amplified from cDNA prepared from cells expressing the proteins described herein, such as prostate tumor cells. Such polynucleotides may be amplified via polymerase chain reaction (PCR). For this approach, sequence-specific primers may be designed based on the sequences provided herein, and may be purchased or synthesized.

An amplified portion may be used to isolate a full length gene from a suitable library (*e.g.*, a prostate tumor cDNA library) using well known techniques. Within such techniques, a library (cDNA or genomic) is screened using one or more polynucleotide probes or primers suitable for amplification. Preferably, a library is size-selected to include larger molecules. Random primed libraries may also be preferred for identifying 5' and upstream regions of genes. Genomic libraries are preferred for obtaining introns and extending 5' sequences.

For hybridization techniques, a partial sequence may be labeled (*e.g.*, by nick-translation or end-labeling with ^{32}P) using well known techniques. A bacterial or bacteriophage library is then screened by hybridizing filters containing denatured bacterial colonies (or lawns containing phage plaques) with the labeled probe (*see* Sambrook et al., *Molecular Cloning: A Laboratory Manual*, Cold Spring Harbor Laboratories, Cold Spring Harbor, NY, 1989). Hybridizing colonies or plaques are selected and expanded, and the DNA is isolated for further analysis. cDNA clones may be analyzed to determine the amount of additional sequence by, for example, PCR using a primer from the partial sequence and a primer from the vector. Restriction maps and partial sequences may be generated to identify one or more overlapping clones. The complete sequence may then be determined using

standard techniques, which may involve generating a series of deletion clones. The resulting overlapping sequences are then assembled into a single contiguous sequence. A full length cDNA molecule can be generated by ligating suitable fragments, using well known techniques.

Alternatively, there are numerous amplification techniques for obtaining a full length coding sequence from a partial cDNA sequence. Within such techniques, amplification is generally performed via PCR. Any of a variety of commercially available kits may be used to perform the amplification step. Primers may be designed using, for example, software well known in the art. Primers are preferably 22-30 nucleotides in length, have a GC content of at least 50% and anneal to the target sequence at temperatures of about 68°C to 72°C. The amplified region may be sequenced as described above, and overlapping sequences assembled into a contiguous sequence.

One such amplification technique is inverse PCR (*see* Triglia et al., *Nucl. Acids Res.* 16:8186, 1988), which uses restriction enzymes to generate a fragment in the known region of the gene. The fragment is then circularized by intramolecular ligation and used as a template for PCR with divergent primers derived from the known region. Within an alternative approach, sequences adjacent to a partial sequence may be retrieved by amplification with a primer to a linker sequence and a primer specific to a known region. The amplified sequences are typically subjected to a second round of amplification with the same linker primer and a second primer specific to the known region. A variation on this procedure, which employs two primers that initiate extension in opposite directions from the known sequence, is described in WO 96/38591. Another such technique is known as "rapid amplification of cDNA ends" or RACE. This technique involves the use of an internal primer and an external primer, which hybridizes to a polyA region or vector sequence, to identify sequences that are 5' and 3' of a known sequence. Additional techniques include capture PCR (Lagerstrom et al., *PCR Methods Applic.* 1:111-19, 1991) and walking PCR (Parker et al., *Nucl. Acids. Res.* 19:3055-60, 1991). Other methods employing amplification may also be employed to obtain a full length cDNA sequence.

In certain instances, it is possible to obtain a full length cDNA sequence by analysis of sequences provided in an expressed sequence tag (EST) database, such as that available from GenBank. Searches for overlapping ESTs may generally be performed using well known programs (*e.g.*, NCBI BLAST searches), and such ESTs may be used to generate a contiguous full length sequence.

Certain nucleic acid sequences of cDNA molecules encoding at least a portion of a prostate tumor protein are provided in SEQ ID NOs:1-111, 115-171, 173-175, 177, 179-305, 307-315, 326, 328, 330, 332-335, 340-375, 381, 382 or 384-472. Isolation of these

polynucleotides is described below. Each of these prostate tumor proteins was overexpressed in prostate tumor tissue.

Polynucleotide variants may generally be prepared by any method known in the art, including chemical synthesis by, for example, solid phase phosphoramidite chemical synthesis. Modifications in a polynucleotide sequence may also be introduced using standard mutagenesis techniques, such as oligonucleotide-directed site-specific mutagenesis (*see* Adelman et al., *DNA* 2:183, 1983). Alternatively, RNA molecules may be generated by *in vitro* or *in vivo* transcription of DNA sequences encoding a prostate tumor protein, or portion thereof, provided that the DNA is incorporated into a vector with a suitable RNA polymerase promoter (such as T7 or SP6). Certain portions may be used to prepare an encoded polypeptide, as described herein. In addition, or alternatively, a portion may be administered to a patient such that the encoded polypeptide is generated *in vivo* (e.g., by transfecting antigen-presenting cells, such as dendritic cells, with a cDNA construct encoding a prostate tumor polypeptide, and administering the transfected cells to the patient).

A portion of a sequence complementary to a coding sequence (*i.e.*, an antisense polynucleotide) may also be used as a probe or to modulate gene expression. cDNA constructs that can be transcribed into antisense RNA may also be introduced into cells of tissues to facilitate the production of antisense RNA. An antisense polynucleotide may be used, as described herein, to inhibit expression of a tumor protein. Antisense technology can be used to control gene expression through triple-helix formation, which compromises the ability of the double helix to open sufficiently for the binding of polymerases, transcription factors or regulatory molecules (*see* Gee et al., *In Huber and Carr, Molecular and Immunologic Approaches*, Futura Publishing Co. (Mt. Kisco, NY; 1994)). Alternatively, an antisense molecule may be designed to hybridize with a control region of a gene (e.g., promoter, enhancer or transcription initiation site), and block transcription of the gene; or to block translation by inhibiting binding of a transcript to ribosomes.

A portion of a coding sequence, or of a complementary sequence, may also be designed as a probe or primer to detect gene expression. Probes may be labeled with a variety of reporter groups, such as radionuclides and enzymes, and are preferably at least 10 nucleotides in length, more preferably at least 20 nucleotides in length and still more preferably at least 30 nucleotides in length. Primers, as noted above, are preferably 22-30 nucleotides in length.

Any polynucleotide may be further modified to increase stability *in vivo*. Possible modifications include, but are not limited to, the addition of flanking sequences at the 5' and/or 3' ends; the use of phosphorothioate or 2' O-methyl rather than phosphodiesterase linkages in the backbone; and/or the inclusion of nontraditional bases such

as inosine, queosine and wybutosine, as well as acetyl-, methyl-, thio- and other modified forms of adenine, cytidine, guanine, thymine and uridine.

Nucleotide sequences as described herein may be joined to a variety of other nucleotide sequences using established recombinant DNA techniques. For example, a polynucleotide may be cloned into any of a variety of cloning vectors, including plasmids, phagemids, lambda phage derivatives and cosmids. Vectors of particular interest include expression vectors, replication vectors, probe generation vectors and sequencing vectors. In general, a vector will contain an origin of replication functional in at least one organism, convenient restriction endonuclease sites and one or more selectable markers. Other elements will depend upon the desired use, and will be apparent to those of ordinary skill in the art.

Within certain embodiments, polynucleotides may be formulated so as to permit entry into a cell of a mammal, and expression therein. Such formulations are particularly useful for therapeutic purposes, as described below. Those of ordinary skill in the art will appreciate that there are many ways to achieve expression of a polynucleotide in a target cell, and any suitable method may be employed. For example, a polynucleotide may be incorporated into a viral vector such as, but not limited to, adenovirus, adeno-associated virus, retrovirus, or vaccinia or other pox virus (*e.g.*, avian pox virus). Techniques for incorporating DNA into such vectors are well known to those of ordinary skill in the art. A retroviral vector may additionally transfer or incorporate a gene for a selectable marker (to aid in the identification or selection of transduced cells) and/or a targeting moiety, such as a gene that encodes a ligand for a receptor on a specific target cell, to render the vector target specific. Targeting may also be accomplished using an antibody, by methods known to those of ordinary skill in the art.

Other formulations for therapeutic purposes include colloidal dispersion systems, such as macromolecule complexes, nanocapsules, microspheres, beads, and lipid-based systems including oil-in-water emulsions, micelles, mixed micelles, and liposomes. A preferred colloidal system for use as a delivery vehicle *in vitro* and *in vivo* is a liposome (*i.e.*, an artificial membrane vesicle). The preparation and use of such systems is well known in the art.

PROSTATE TUMOR POLYPEPTIDES

Within the context of the present invention, polypeptides may comprise at least an immunogenic portion of a prostate tumor protein or a variant thereof, as described herein. As noted above, a "prostate tumor protein" is a protein that is expressed by prostate tumor cells. Proteins that are prostate tumor proteins also react detectably within an immunoassay (such as an ELISA) with antisera from a patient with prostate cancer. Polypeptides as described herein may be of any length. Additional sequences derived from

the native protein and/or heterologous sequences may be present, and such sequences may (but need not) possess further immunogenic or antigenic properties.

An "immunogenic portion," as used herein is a portion of a protein that is recognized (*i.e.*, specifically bound) by a B-cell and/or T-cell surface antigen receptor. Such immunogenic portions generally comprise at least 5 amino acid residues, more preferably at least 10, and still more preferably at least 20 amino acid residues of a prostate tumor protein or a variant thereof. Certain preferred immunogenic portions include peptides in which an N-terminal leader sequence and/or transmembrane domain have been deleted. Other preferred immunogenic portions may contain a small N- and/or C-terminal deletion (*e.g.*, 1-30 amino acids, preferably 5-15 amino acids), relative to the mature protein.

Immunogenic portions may generally be identified using well known techniques, such as those summarized in Paul, *Fundamental Immunology*, 3rd ed., 243-247 (Raven Press, 1993) and references cited therein. Such techniques include screening polypeptides for the ability to react with antigen-specific antibodies, antisera and/or T-cell lines or clones. As used herein, antisera and antibodies are "antigen-specific" if they specifically bind to an antigen (*i.e.*, they react with the protein in an ELISA or other immunoassay, and do not react detectably with unrelated proteins). Such antisera and antibodies may be prepared as described herein, and using well known techniques. An immunogenic portion of a native prostate tumor protein is a portion that reacts with such antisera and/or T-cells at a level that is not substantially less than the reactivity of the full length polypeptide (*e.g.*, in an ELISA and/or T-cell reactivity assay). Such immunogenic portions may react within such assays at a level that is similar to or greater than the reactivity of the full length polypeptide. Such screens may generally be performed using methods well known to those of ordinary skill in the art, such as those described in Harlow and Lane, *Antibodies: A Laboratory Manual*, Cold Spring Harbor Laboratory, 1988. For example, a polypeptide may be immobilized on a solid support and contacted with patient sera to allow binding of antibodies within the sera to the immobilized polypeptide. Unbound sera may then be removed and bound antibodies detected using, for example, ¹²⁵I-labeled Protein A.

As noted above, a composition may comprise a variant of a native prostate tumor protein. A polypeptide "variant," as used herein, is a polypeptide that differs from a native prostate tumor protein in one or more substitutions, deletions, additions and/or insertions, such that the immunogenicity of the polypeptide is not substantially diminished. In other words, the ability of a variant to react with antigen-specific antisera may be enhanced or unchanged, relative to the native protein, or may be diminished by less than 50%, and preferably less than 20%, relative to the native protein. Such variants may generally be identified by modifying one of the above polypeptide sequences and evaluating the reactivity of the modified polypeptide with antigen-specific antibodies or antisera as described herein.

Preferred variants include those in which one or more portions, such as an N-terminal leader sequence or transmembrane domain, have been removed. Other preferred variants include variants in which a small portion (*e.g.*, 1-30 amino acids, preferably 5-15 amino acids) has been removed from the N- and/or C-terminal of the mature protein. Polypeptide variants preferably exhibit at least about 70%, more preferably at least about 90% and most preferably at least about 95% identity (determined as described above) to the identified polypeptides.

Preferably, a variant contains conservative substitutions. A "conservative substitution" is one in which an amino acid is substituted for another amino acid that has similar properties, such that one skilled in the art of peptide chemistry would expect the secondary structure and hydropathic nature of the polypeptide to be substantially unchanged. Amino acid substitutions may generally be made on the basis of similarity in polarity, charge, solubility, hydrophobicity, hydrophilicity and/or the amphipathic nature of the residues. For example, negatively charged amino acids include aspartic acid and glutamic acid; positively charged amino acids include lysine and arginine; and amino acids with uncharged polar head groups having similar hydrophilicity values include leucine, isoleucine and valine; glycine and alanine; asparagine and glutamine; and serine, threonine, phenylalanine and tyrosine. Other groups of amino acids that may represent conservative changes include: (1) ala, pro, gly, glu, asp, gln, asn, ser, thr; (2) cys, ser, tyr, thr; (3) val, ile, leu, met, ala, phe; (4) lys, arg, his; and (5) phe, tyr, trp, his. A variant may also, or alternatively, contain nonconservative changes. In a preferred embodiment, variant polypeptides differ from a native sequence by substitution, deletion or addition of five amino acids or fewer. Variants may also (or alternatively) be modified by, for example, the deletion or addition of amino acids that have minimal influence on the immunogenicity, secondary structure and hydropathic nature of the polypeptide.

As noted above, polypeptides may comprise a signal (or leader) sequence at the N-terminal end of the protein which co-translationally or post-translationally directs transfer of the protein. The polypeptide may also be conjugated to a linker or other sequence for ease of synthesis, purification or identification of the polypeptide (*e.g.*, poly-His), or to enhance binding of the polypeptide to a solid support. For example, a polypeptide may be conjugated to an immunoglobulin Fc region.

Polypeptides may be prepared using any of a variety of well known techniques. Recombinant polypeptides encoded by DNA sequences as described above may be readily prepared from the DNA sequences using any of a variety of expression vectors known to those of ordinary skill in the art. Expression may be achieved in any appropriate host cell that has been transformed or transfected with an expression vector containing a DNA molecule that encodes a recombinant polypeptide. Suitable host cells include prokaryotes, yeast and higher eukaryotic cells. Preferably, the host cells employed are

E. coli, yeast or a mammalian cell line such as COS or CHO. Supernatants from suitable host/vector systems which secrete recombinant protein or polypeptide into culture media may be first concentrated using a commercially available filter. Following concentration, the concentrate may be applied to a suitable purification matrix such as an affinity matrix or an ion exchange resin. Finally, one or more reverse phase HPLC steps can be employed to further purify a recombinant polypeptide.

Portions and other variants having fewer than about 100 amino acids, and generally fewer than about 50 amino acids, may also be generated by synthetic means, using techniques well known to those of ordinary skill in the art. For example, such polypeptides may be synthesized using any of the commercially available solid-phase techniques, such as the Merrifield solid-phase synthesis method, where amino acids are sequentially added to a growing amino acid chain. See Merrifield, *J. Am. Chem. Soc.* 85:2149-2146, 1963. Equipment for automated synthesis of polypeptides is commercially available from suppliers such as Perkin Elmer/Applied BioSystems Division (Foster City, CA), and may be operated according to the manufacturer's instructions.

Within certain specific embodiments, a polypeptide may be a fusion protein that comprises multiple polypeptides as described herein, or that comprises at least one polypeptide as described herein and an unrelated sequence, such as a known tumor protein. A fusion partner may, for example, assist in providing T helper epitopes (an immunological fusion partner), preferably T helper epitopes recognized by humans, or may assist in expressing the protein (an expression enhancer) at higher yields than the native recombinant protein. Certain preferred fusion partners are both immunological and expression enhancing fusion partners. Other fusion partners may be selected so as to increase the solubility of the protein or to enable the protein to be targeted to desired intracellular compartments. Still further fusion partners include affinity tags, which facilitate purification of the protein.

Fusion proteins may generally be prepared using standard techniques, including chemical conjugation. Preferably, a fusion protein is expressed as a recombinant protein, allowing the production of increased levels, relative to a non-fused protein, in an expression system. Briefly, DNA sequences encoding the polypeptide components may be assembled separately, and ligated into an appropriate expression vector. The 3' end of the DNA sequence encoding one polypeptide component is ligated, with or without a peptide linker, to the 5' end of a DNA sequence encoding the second polypeptide component so that the reading frames of the sequences are in phase. This permits translation into a single fusion protein that retains the biological activity of both component polypeptides.

A peptide linker sequence may be employed to separate the first and the second polypeptide components by a distance sufficient to ensure that each polypeptide folds into its secondary and tertiary structures. Such a peptide linker sequence is incorporated into

the fusion protein using standard techniques well known in the art. Suitable peptide linker sequences may be chosen based on the following factors: (1) their ability to adopt a flexible extended conformation; (2) their inability to adopt a secondary structure that could interact with functional epitopes on the first and second polypeptides; and (3) the lack of hydrophobic or charged residues that might react with the polypeptide functional epitopes. Preferred peptide linker sequences contain Gly, Asn and Ser residues. Other near neutral amino acids, such as Thr and Ala may also be used in the linker sequence. Amino acid sequences which may be usefully employed as linkers include those disclosed in Maratea et al., *Gene* 40:39-46, 1985; Murphy et al., *Proc. Natl. Acad. Sci. USA* 83:8258-8262, 1986; U.S. Patent No. 4,935,233 and U.S. Patent No. 4,751,180. The linker sequence may generally be from 1 to about 50 amino acids in length. Linker sequences are not required when the first and second polypeptides have non-essential N-terminal amino acid regions that can be used to separate the functional domains and prevent steric interference.

The ligated DNA sequences are operably linked to suitable transcriptional or translational regulatory elements. The regulatory elements responsible for expression of DNA are located only 5' to the DNA sequence encoding the first polypeptides. Similarly, stop codons required to end translation and transcription termination signals are only present 3' to the DNA sequence encoding the second polypeptide.

Fusion proteins are also provided that comprise a polypeptide of the present invention together with an unrelated immunogenic protein. Preferably the immunogenic protein is capable of eliciting a recall response. Examples of such proteins include tetanus, tuberculosis and hepatitis proteins (*see*, for example, Stoute et al. *New Engl. J. Med.*, 336:86-91, 1997).

Within preferred embodiments, an immunological fusion partner is derived from protein D, a surface protein of the gram-negative bacterium *Haemophilus influenza B* (WO 91/18926). Preferably, a protein D derivative comprises approximately the first third of the protein (*e.g.*, the first N-terminal 100-110 amino acids), and a protein D derivative may be lipidated. Within certain preferred embodiments, the first 109 residues of a Lipoprotein D fusion partner is included on the N-terminus to provide the polypeptide with additional exogenous T-cell epitopes and to increase the expression level in *E. coli* (thus functioning as an expression enhancer). The lipid tail ensures optimal presentation of the antigen to antigen presenting cells. Other fusion partners include the non-structural protein from influenzae virus, NS1 (hemagglutinin). Typically, the N-terminal 81 amino acids are used, although different fragments that include T-helper epitopes may be used.

In another embodiment, the immunological fusion partner is the protein known as LYTA, or a portion thereof (preferably a C-terminal portion). LYTA is derived from *Streptococcus pneumoniae*, which synthesizes an N-acetyl-L-alanine amidase known as

amidase LYTA (encoded by the *LytA* gene; *Gene* 43:265-292, 1986). LYTA is an autolysin that specifically degrades certain bonds in the peptidoglycan backbone. The C-terminal domain of the LYTA protein is responsible for the affinity to the choline or to some choline analogues such as DEAE. This property has been exploited for the development of *E. coli* C-LYTA expressing plasmids useful for expression of fusion proteins. Purification of hybrid proteins containing the C-LYTA fragment at the amino terminus has been described (*see Biotechnology* 10:795-798, 1992). Within a preferred embodiment, a repeat portion of LYTA may be incorporated into a fusion protein. A repeat portion is found in the C-terminal region starting at residue 178. A particularly preferred repeat portion incorporates residues 188-305.

In general, polypeptides (including fusion proteins) and polynucleotides as described herein are isolated. An "isolated" polypeptide or polynucleotide is one that is removed from its original environment. For example, a naturally-occurring protein is isolated if it is separated from some or all of the coexisting materials in the natural system. Preferably, such polypeptides are at least about 90% pure, more preferably at least about 95% pure and most preferably at least about 99% pure. A polynucleotide is considered to be isolated if, for example, it is cloned into a vector that is not a part of the natural environment.

BINDING AGENTS

The present invention further provides agents, such as antibodies and antigen-binding fragments thereof, that specifically bind to a prostate tumor protein. As used herein, an antibody, or antigen-binding fragment thereof, is said to "specifically bind" to a prostate tumor protein if it reacts at a detectable level (within, for example, an ELISA) with a prostate tumor protein, and does not react detectably with unrelated proteins under similar conditions. As used herein, "binding" refers to a noncovalent association between two separate molecules such that a complex is formed. The ability to bind may be evaluated by, for example, determining a binding constant for the formation of the complex. The binding constant is the value obtained when the concentration of the complex is divided by the product of the component concentrations. In general, two compounds are said to "bind," in the context of the present invention, when the binding constant for complex formation exceeds about 10^3 L/mol. The binding constant may be determined using methods well known in the art.

Binding agents may be further capable of differentiating between patients with and without a cancer, such as prostate cancer, using the representative assays provided herein. In other words, antibodies or other binding agents that bind to a prostate tumor protein will generate a signal indicating the presence of a cancer in at least about 20% of patients with the disease, and will generate a negative signal indicating the absence of the disease in at least about 90% of individuals without the cancer. To determine whether a binding agent satisfies this requirement, biological samples (e.g., blood, sera, urine and/or tumor biopsies) from

patients with and without a cancer (as determined using standard clinical tests) may be assayed as described herein for the presence of polypeptides that bind to the binding agent. It will be apparent that a statistically significant number of samples with and without the disease should be assayed. Each binding agent should satisfy the above criteria; however, those of ordinary skill in the art will recognize that binding agents may be used in combination to improve sensitivity.

Any agent that satisfies the above requirements may be a binding agent. For example, a binding agent may be a ribosome, with or without a peptide component, an RNA molecule or a polypeptide. In a preferred embodiment, a binding agent is an antibody or an antigen-binding fragment thereof. Antibodies may be prepared by any of a variety of techniques known to those of ordinary skill in the art. *See, e.g., Harlow and Lane, Antibodies: A Laboratory Manual*, Cold Spring Harbor Laboratory, 1988. In general, antibodies can be produced by cell culture techniques, including the generation of monoclonal antibodies as described herein, or via transfection of antibody genes into suitable bacterial or mammalian cell hosts, in order to allow for the production of recombinant antibodies. In one technique, an immunogen comprising the polypeptide is initially injected into any of a wide variety of mammals (*e.g., mice, rats, rabbits, sheep or goats*). In this step, the polypeptides of this invention may serve as the immunogen without modification. Alternatively, particularly for relatively short polypeptides, a superior immune response may be elicited if the polypeptide is joined to a carrier protein, such as bovine serum albumin or keyhole limpet hemocyanin. The immunogen is injected into the animal host, preferably according to a predetermined schedule incorporating one or more booster immunizations, and the animals are bled periodically. Polyclonal antibodies specific for the polypeptide may then be purified from such antisera by, for example, affinity chromatography using the polypeptide coupled to a suitable solid support.

Monoclonal antibodies specific for an antigenic polypeptide of interest may be prepared, for example, using the technique of Kohler and Milstein, *Eur. J. Immunol.* 6:511-519, 1976, and improvements thereto. Briefly, these methods involve the preparation of immortal cell lines capable of producing antibodies having the desired specificity (*i.e., reactivity with the polypeptide of interest*). Such cell lines may be produced, for example, from spleen cells obtained from an animal immunized as described above. The spleen cells are then immortalized by, for example, fusion with a myeloma cell fusion partner, preferably one that is syngeneic with the immunized animal. A variety of fusion techniques may be employed. For example, the spleen cells and myeloma cells may be combined with a nonionic detergent for a few minutes and then plated at low density on a selective medium that supports the growth of hybrid cells, but not myeloma cells. A preferred selection technique uses HAT (hypoxanthine, aminopterin, thymidine) selection. After a sufficient

time, usually about 1 to 2 weeks, colonies of hybrids are observed. Single colonies are selected and their culture supernatants tested for binding activity against the polypeptide. Hybridomas having high reactivity and specificity are preferred.

Monoclonal antibodies may be isolated from the supernatants of growing hybridoma colonies. In addition, various techniques may be employed to enhance the yield, such as injection of the hybridoma cell line into the peritoneal cavity of a suitable vertebrate host, such as a mouse. Monoclonal antibodies may then be harvested from the ascites fluid or the blood. Contaminants may be removed from the antibodies by conventional techniques, such as chromatography, gel filtration, precipitation, and extraction. The polypeptides of this invention may be used in the purification process in, for example, an affinity chromatography step.

Within certain embodiments, the use of antigen-binding fragments of antibodies may be preferred. Such fragments include Fab fragments, which may be prepared using standard techniques. Briefly, immunoglobulins may be purified from rabbit serum by affinity chromatography on Protein A bead columns (Harlow and Lane, *Antibodies: A Laboratory Manual*, Cold Spring Harbor Laboratory, 1988) and digested by papain to yield Fab and Fc fragments. The Fab and Fc fragments may be separated by affinity chromatography on protein A bead columns.

Monoclonal antibodies of the present invention may be coupled to one or more therapeutic agents. Suitable agents in this regard include radionuclides, differentiation inducers, drugs, toxins, and derivatives thereof. Preferred radionuclides include ^{90}Y , ^{123}I , ^{125}I , ^{131}I , ^{186}Re , ^{188}Re , ^{211}At , and ^{212}Bi . Preferred drugs include methotrexate, and pyrimidine and purine analogs. Preferred differentiation inducers include phorbol esters and butyric acid. Preferred toxins include ricin, abrin, diphtheria toxin, cholera toxin, gelonin, *Pseudomonas* exotoxin, *Shigella* toxin, and pokeweed antiviral protein.

A therapeutic agent may be coupled (*e.g.*, covalently bonded) to a suitable monoclonal antibody either directly or indirectly (*e.g.*, via a linker group). A direct reaction between an agent and an antibody is possible when each possesses a substituent capable of reacting with the other. For example, a nucleophilic group, such as an amino or sulfhydryl group, on one may be capable of reacting with a carbonyl-containing group, such as an anhydride or an acid halide, or with an alkyl group containing a good leaving group (*e.g.*, a halide) on the other.

Alternatively, it may be desirable to couple a therapeutic agent and an antibody via a linker group. A linker group can function as a spacer to distance an antibody from an agent in order to avoid interference with binding capabilities. A linker group can also serve to increase the chemical reactivity of a substituent on an agent or an antibody, and

thus increase the coupling efficiency. An increase in chemical reactivity may also facilitate the use of agents, or functional groups on agents, which otherwise would not be possible.

It will be evident to those skilled in the art that a variety of bifunctional or polyfunctional reagents, both homo- and hetero-functional (such as those described in the catalog of the Pierce Chemical Co., Rockford, IL), may be employed as the linker group. Coupling may be effected, for example, through amino groups, carboxyl groups, sulfhydryl groups or oxidized carbohydrate residues. There are numerous references describing such methodology, *e.g.*, U.S. Patent No. 4,671,958, to Rodwell et al.

Where a therapeutic agent is more potent when free from the antibody portion of the immunoconjugates of the present invention, it may be desirable to use a linker group which is cleavable during or upon internalization into a cell. A number of different cleavable linker groups have been described. The mechanisms for the intracellular release of an agent from these linker groups include cleavage by reduction of a disulfide bond (*e.g.*, U.S. Patent No. 4,489,710, to Spitler), by irradiation of a photolabile bond (*e.g.*, U.S. Patent No. 4,625,014, to Senter et al.), by hydrolysis of derivatized amino acid side chains (*e.g.*, U.S. Patent No. 4,638,045, to Kohn et al.), by serum complement-mediated hydrolysis (*e.g.*, U.S. Patent No. 4,671,958, to Rodwell et al.), and acid-catalyzed hydrolysis (*e.g.*, U.S. Patent No. 4,569,789, to Blattler et al.).

It may be desirable to couple more than one agent to an antibody. In one embodiment, multiple molecules of an agent are coupled to one antibody molecule. In another embodiment, more than one type of agent may be coupled to one antibody. Regardless of the particular embodiment, immunoconjugates with more than one agent may be prepared in a variety of ways. For example, more than one agent may be coupled directly to an antibody molecule, or linkers which provide multiple sites for attachment can be used. Alternatively, a carrier can be used.

A carrier may bear the agents in a variety of ways, including covalent bonding either directly or via a linker group. Suitable carriers include proteins such as albumins (*e.g.*, U.S. Patent No. 4,507,234, to Kato et al.), peptides and polysaccharides such as aminodextran (*e.g.*, U.S. Patent No. 4,699,784, to Shih et al.). A carrier may also bear an agent by noncovalent bonding or by encapsulation, such as within a liposome vesicle (*e.g.*, U.S. Patent Nos. 4,429,008 and 4,873,088). Carriers specific for radionuclide agents include radiohalogenated small molecules and chelating compounds. For example, U.S. Patent No. 4,735,792 discloses representative radiohalogenated small molecules and their synthesis. A radionuclide chelate may be formed from chelating compounds that include those containing nitrogen and sulfur atoms as the donor atoms for binding the metal, or metal oxide, radionuclide. For example, U.S. Patent No. 4,673,562, to Davison et al. discloses representative chelating compounds and their synthesis.

A variety of routes of administration for the antibodies and immunoconjugates may be used. Typically, administration will be intravenous, intramuscular, subcutaneous or in the bed of a resected tumor. It will be evident that the precise dose of the antibody/immunoconjugate will vary depending upon the antibody used, the antigen density on the tumor, and the rate of clearance of the antibody.

T CELLS

Immunotherapeutic compositions may also, or alternatively, comprise T cells specific for a prostate tumor protein. Such cells may generally be prepared *in vitro* or *ex vivo*, using standard procedures. For example, T cells may be isolated from bone marrow, peripheral blood, or a fraction of bone marrow or peripheral blood of a patient, using a commercially available cell separation system, such as the CEPRATE™ system, available from CellPro Inc., Bothell WA (*see also* U.S. Patent No. 5,240,856; U.S. Patent No. 5,215,926; WO 89/06280; WO 91/16116 and WO 92/07243). Alternatively, T cells may be derived from related or unrelated humans, non-human mammals, cell lines or cultures.

T cells may be stimulated with a prostate tumor polypeptide, polynucleotide encoding a prostate tumor polypeptide and/or an antigen presenting cell (APC) that expresses such a polypeptide. Such stimulation is performed under conditions and for a time sufficient to permit the generation of T cells that are specific for the polypeptide. Preferably, a prostate tumor polypeptide or polynucleotide is present within a delivery vehicle, such as a microsphere, to facilitate the generation of specific T cells.

T cells are considered to be specific for a prostate tumor polypeptide if the T cells kill target cells coated with the polypeptide or expressing a gene encoding the polypeptide. T cell specificity may be evaluated using any of a variety of standard techniques. For example, within a chromium release assay or proliferation assay, a stimulation index of more than two fold increase in lysis and/or proliferation, compared to negative controls, indicates T cell specificity. Such assays may be performed, for example, as described in Chen et al., *Cancer Res.* 54:1065-1070, 1994. Alternatively, detection of the proliferation of T cells may be accomplished by a variety of known techniques. For example, T cell proliferation can be detected by measuring an increased rate of DNA synthesis (*e.g.*, by pulse-labeling cultures of T cells with tritiated thymidine and measuring the amount of tritiated thymidine incorporated into DNA). Contact with a prostate tumor polypeptide (100 ng/ml - 100 µg/ml, preferably 200 ng/ml - 25 µg/ml) for 3 - 7 days should result in at least a two fold increase in proliferation of the T cells. Contact as described above for 2-3 hours should result in activation of the T cells, as measured using standard cytokine assays in which a two fold increase in the level of cytokine release (*e.g.*, TNF or IFN-γ) is indicative of T cell activation (*see* Coligan et al., *Current Protocols in Immunology*, vol. 1, Wiley Interscience

(Greene 1998)). T cells that have been activated in response to a prostate tumor polypeptide, polynucleotide or polypeptide-expressing APC may be CD4⁺ and/or CD8⁺. Prostate tumor protein-specific T cells may be expanded using standard techniques. Within preferred embodiments, the T cells are derived from either a patient or a related, or unrelated, donor and are administered to the patient following stimulation and expansion.

For therapeutic purposes, CD4⁺ or CD8⁺ T cells that proliferate in response to a prostate tumor polypeptide, polynucleotide or APC can be expanded in number either *in vitro* or *in vivo*. Proliferation of such T cells *in vitro* may be accomplished in a variety of ways. For example, the T cells can be re-exposed to a prostate tumor polypeptide, or a short peptide corresponding to an immunogenic portion of such a polypeptide, with or without the addition of T cell growth factors, such as interleukin-2, and/or stimulator cells that synthesize a prostate tumor polypeptide. Alternatively, one or more T cells that proliferate in the presence of a prostate tumor protein can be expanded in number by cloning. Methods for cloning cells are well known in the art, and include limiting dilution.

PHARMACEUTICAL COMPOSITIONS AND VACCINES

Within certain aspects, polypeptides, polynucleotides, T cells and/or binding agents disclosed herein may be incorporated into pharmaceutical compositions or immunogenic compositions (*i.e.*, vaccines). Pharmaceutical compositions comprise one or more such compounds and a physiologically acceptable carrier. Vaccines may comprise one or more such compounds and a non-specific immune response enhancer. A non-specific immune response enhancer may be any substance that enhances an immune response to an exogenous antigen. Examples of non-specific immune response enhancers include adjuvants, biodegradable microspheres (*e.g.*, polylactic galactide) and liposomes (into which the compound is incorporated; *see e.g.*, Fullerton, U.S. Patent No. 4,235,877). Vaccine preparation is generally described in, for example, M.F. Powell and M.J. Newman, eds., "Vaccine Design (the subunit and adjuvant approach)," Plenum Press (NY, 1995). Pharmaceutical compositions and vaccines within the scope of the present invention may also contain other compounds, which may be biologically active or inactive. For example, one or more immunogenic portions of other tumor antigens may be present, either incorporated into a fusion polypeptide or as a separate compound, within the composition or vaccine.

A pharmaceutical composition or vaccine may contain DNA encoding one or more of the polypeptides as described above, such that the polypeptide is generated *in situ*. As noted above, the DNA may be present within any of a variety of delivery systems known to those of ordinary skill in the art, including nucleic acid expression systems, bacteria and viral expression systems. Numerous gene delivery techniques are well known in the art, such as those described by Rolland, *Crit. Rev. Therap. Drug Carrier Systems* 15:143-198, 1998,

and references cited therein. Appropriate nucleic acid expression systems contain the necessary DNA sequences for expression in the patient (such as a suitable promoter and terminating signal). Bacterial delivery systems involve the administration of a bacterium (such as *Bacillus-Calmette-Guerrin*) that expresses an immunogenic portion of the polypeptide on its cell surface or secretes such an epitope. In a preferred embodiment, the DNA may be introduced using a viral expression system (e.g., vaccinia or other pox virus, retrovirus, or adenovirus), which may involve the use of a non-pathogenic (defective), replication competent virus. Suitable systems are disclosed, for example, in Fisher-Hoch et al., *Proc. Natl. Acad. Sci. USA* 86:317-321, 1989; Flexner et al., *Ann. N.Y. Acad. Sci.* 569:86-103, 1989; Flexner et al., *Vaccine* 8:17-21, 1990; U.S. Patent Nos. 4,603,112, 4,769,330, and 5,017,487; WO 89/01973; U.S. Patent No. 4,777,127; GB 2,200,651; EP 0,345,242; WO 91/02805; Berkner, *Biotechniques* 6:616-627, 1988; Rosenfeld et al., *Science* 252:431-434, 1991; Kolls et al., *Proc. Natl. Acad. Sci. USA* 91:215-219, 1994; Kass-Eisler et al., *Proc. Natl. Acad. Sci. USA* 90:11498-11502, 1993; Guzman et al., *Circulation* 88:2838-2848, 1993; and Guzman et al., *Cir. Res.* 73:1202-1207, 1993. Techniques for incorporating DNA into such expression systems are well known to those of ordinary skill in the art. The DNA may also be "naked," as described, for example, in Ulmer et al., *Science* 259:1745-1749, 1993 and reviewed by Cohen, *Science* 259:1691-1692, 1993. The uptake of naked DNA may be increased by coating the DNA onto biodegradable beads, which are efficiently transported into the cells.

While any suitable carrier known to those of ordinary skill in the art may be employed in the pharmaceutical compositions of this invention, the type of carrier will vary depending on the mode of administration. Compositions of the present invention may be formulated for any appropriate manner of administration, including for example, topical, oral, nasal, intravenous, intracranial, intraperitoneal, subcutaneous or intramuscular administration. For parenteral administration, such as subcutaneous injection, the carrier preferably comprises water, saline, alcohol, a fat, a wax or a buffer. For oral administration, any of the above carriers or a solid carrier, such as mannitol, lactose, starch, magnesium stearate, sodium saccharine, talcum, cellulose, glucose, sucrose, and magnesium carbonate, may be employed. Biodegradable microspheres (e.g., polylactate polyglycolate) may also be employed as carriers for the pharmaceutical compositions of this invention. Suitable biodegradable microspheres are disclosed, for example, in U.S. Patent Nos. 4,897,268 and 5,075,109.

Such compositions may also comprise buffers (e.g., neutral buffered saline or phosphate buffered saline), carbohydrates (e.g., glucose, mannose, sucrose or dextrans), mannitol, proteins, polypeptides or amino acids such as glycine, antioxidants, chelating agents such as EDTA or glutathione, adjuvants (e.g., aluminum hydroxide) and/or

preservatives. Alternatively, compositions of the present invention may be formulated as a lyophilizate. Compounds may also be encapsulated within liposomes using well known technology.

Any of a variety of non-specific immune response enhancers may be employed in the vaccines of this invention. For example, an adjuvant may be included. Most adjuvants contain a substance designed to protect the antigen from rapid catabolism, such as aluminum hydroxide or mineral oil, and a stimulator of immune responses, such as lipid A, *Bordetella pertussis* or *Mycobacterium tuberculosis* derived proteins. Suitable adjuvants are commercially available as, for example, Freund's Incomplete Adjuvant and Complete Adjuvant (Difco Laboratories, Detroit, MI); Merck Adjuvant 65 (Merck and Company, Inc., Rahway, NJ); aluminum salts such as aluminum hydroxide gel (alum) or aluminum phosphate; salts of calcium, iron or zinc; an insoluble suspension of acylated tyrosine; acylated sugars; cationically or anionically derivatized polysaccharides; polyphosphazenes; biodegradable microspheres; monophosphoryl lipid A and quil A. Cytokines, such as GM-CSF or interleukin-2, -7, or -12, may also be used as adjuvants.

Within the vaccines provided herein, the adjuvant composition is preferably designed to induce an immune response predominantly of the Th1 type. High levels of Th1-type cytokines (e.g., IFN- γ , IL-2 and IL-12) tend to favor the induction of cell mediated immune responses to an administered antigen. In contrast, high levels of Th2-type cytokines (e.g., IL-4, IL-5, IL-6, IL-10 and TNF- β) tend to favor the induction of humoral immune responses. Following application of a vaccine as provided herein, a patient will support an immune response that includes Th1- and Th2-type responses. Within a preferred embodiment, in which a response is predominantly Th1-type, the level of Th1-type cytokines will increase to a greater extent than the level of Th2-type cytokines. The levels of these cytokines may be readily assessed using standard assays. For a review of the families of cytokines, see Mosmann and Coffman, *Ann. Rev. Immunol.* 7:145-173, 1989.

Preferred adjuvants for use in eliciting a predominantly Th1-type response include, for example, a combination of monophosphoryl lipid A, preferably 3-de-O-acylated monophosphoryl lipid A (3D-MPL), together with an aluminum salt. MPL adjuvants are available from Ribi ImmunoChem Research Inc. (Hamilton, MT; see US Patent Nos. 4,436,727; 4,877,611; 4,866,034 and 4,912,094). CpG-containing oligonucleotides (in which the CpG dinucleotide is unmethylated) also induce a predominantly Th1 response. Such oligonucleotides are well known and are described, for example, in WO 96/02555. Another preferred adjuvant is a saponin, preferably QS21, which may be used alone or in combination with other adjuvants. For example, an enhanced system involves the combination of a monophosphoryl lipid A and saponin derivative, such as the combination of QS21 and 3D-MPL as described in WO 94/00153, or a less reactogenic composition where the QS21 is

quenched with cholesterol, as described in WO 96/33739. Other preferred formulations comprises an oil-in-water emulsion and tocopherol. A particularly potent adjuvant formulation involving QS21, 3D-MPL and tocopherol in an oil-in-water emulsion is described in WO 95/17210. Any vaccine provided herein may be prepared using well known methods that result in a combination of antigen, immune response enhancer and a suitable carrier or excipient.

The compositions described herein may be administered as part of a sustained release formulation (*i.e.*, a formulation such as a capsule or sponge that effects a slow release of compound following administration). Such formulations may generally be prepared using well known technology and administered by, for example, oral, rectal or subcutaneous implantation, or by implantation at the desired target site. Sustained-release formulations may contain a polypeptide, polynucleotide or antibody dispersed in a carrier matrix and/or contained within a reservoir surrounded by a rate controlling membrane. Carriers for use within such formulations are biocompatible, and may also be biodegradable; preferably the formulation provides a relatively constant level of active component release. The amount of active compound contained within a sustained release formulation depends upon the site of implantation, the rate and expected duration of release and the nature of the condition to be treated or prevented.

Any of a variety of delivery vehicles may be employed within pharmaceutical compositions and vaccines to facilitate production of an antigen-specific immune response that targets tumor cells. Delivery vehicles include antigen presenting cells (APCs), such as dendritic cells, macrophages, B cells, monocytes and other cells that may be engineered to be efficient APCs. Such cells may, but need not, be genetically modified to increase the capacity for presenting the antigen, to improve activation and/or maintenance of the T cell response, to have anti-tumor effects *per se* and/or to be immunologically compatible with the receiver (*i.e.*, matched HLA haplotype). APCs may generally be isolated from any of a variety of biological fluids and organs, including tumor and peritumoral tissues, and may be autologous, allogeneic, syngeneic or xenogeneic cells.

Certain preferred embodiments of the present invention use dendritic cells or progenitors thereof as antigen-presenting cells. Dendritic cells are highly potent APCs (Banchereau and Steinman, *Nature* 392:245-251, 1998) and have been shown to be effective as a physiological adjuvant for eliciting prophylactic or therapeutic antitumor immunity (*see* Timmerman and Levy, *Ann. Rev. Med.* 50:507-529, 1999). In general, dendritic cells may be identified based on their typical shape (stellate *in situ*, with marked cytoplasmic processes (dendrites) visible *in vitro*) and based on the lack of differentiation markers of B cells (CD19 and CD20), T cells (CD3), monocytes (CD14) and natural killer cells (CD56), as determined using standard assays. Dendritic cells may, of course, be engineered to express specific cell-

surface receptors or ligands that are not commonly found on dendritic cells *in vivo* or *ex vivo*, and such modified dendritic cells are contemplated by the present invention. As an alternative to dendritic cells, secreted vesicles antigen-loaded dendritic cells (called exosomes) may be used within a vaccine (*see* Zitvogel et al., *Nature Med.* 4:594-600, 1998).

Dendritic cells and progenitors may be obtained from peripheral blood, bone marrow, tumor-infiltrating cells, peritumoral tissues-infiltrating cells, lymph nodes, spleen, skin, umbilical cord blood or any other suitable tissue or fluid. For example, dendritic cells may be differentiated *ex vivo* by adding a combination of cytokines such as GM-CSF, IL-4, IL-13 and/or TNF α to cultures of monocytes harvested from peripheral blood. Alternatively, CD34 positive cells harvested from peripheral blood, umbilical cord blood or bone marrow may be differentiated into dendritic cells by adding to the culture medium combinations of GM-CSF, IL-3, TNF α , CD40 ligand, LPS, flt3 ligand and/or other compound(s) that induce maturation and proliferation of dendritic cells.

Dendritic cells are conveniently categorized as "immature" and "mature" cells, which allows a simple way to discriminate between two well characterized phenotypes. However, this nomenclature should not be construed to exclude all possible intermediate stages of differentiation. Immature dendritic cells are characterized as APC with a high capacity for antigen uptake and processing, which correlates with the high expression of Fc γ receptor, mannose receptor and DEC-205 marker. The mature phenotype is typically characterized by a lower expression of these markers, but a high expression of cell surface molecules responsible for T cell activation such as class I and class II MHC, adhesion molecules (*e.g.*, CD54 and CD11) and costimulatory molecules (*e.g.*, CD40, CD80 and CD86).

APCs may generally be transfected with a polynucleotide encoding a prostate tumor protein (or portion or other variant thereof) such that the prostate tumor polypeptide, or an immunogenic portion thereof, is expressed on the cell surface. Such transfection may take place *ex vivo*, and a composition or vaccine comprising such transfected cells may then be used for therapeutic purposes, as described herein. Alternatively, a gene delivery vehicle that targets a dendritic or other antigen presenting cell may be administered to a patient, resulting in transfection that occurs *in vivo*. *In vivo* and *ex vivo* transfection of dendritic cells, for example, may generally be performed using any methods known in the art, such as those described in WO 97/24447, or the gene gun approach described by Mahvi et al., *Immunology and cell Biology* 75:456-460, 1997. Antigen loading of dendritic cells may be achieved by incubating dendritic cells or progenitor cells with the prostate tumor polypeptide, DNA (naked or within a plasmid vector) or RNA; or with antigen-expressing recombinant bacterium or viruses (*e.g.*, vaccinia, fowlpox, adenovirus or lentivirus vectors). Prior to loading, the polypeptide may be covalently conjugated to an immunological partner that

provides T cell help (e.g., a carrier molecule). Alternatively, a dendritic cell may be pulsed with a non-conjugated immunological partner, separately or in the presence of the polypeptide.

CANCER THERAPY

In further aspects of the present invention, the compositions described herein may be used for immunotherapy of cancer, such as prostate cancer. Within such methods, pharmaceutical compositions and vaccines are typically administered to a patient. As used herein, a "patient" refers to any warm-blooded animal, preferably a human. A patient may or may not be afflicted with cancer. Accordingly, the above pharmaceutical compositions and vaccines may be used to prevent the development of a cancer or to treat a patient afflicted with a cancer. A cancer may be diagnosed using criteria generally accepted in the art, including the presence of a malignant tumor. Pharmaceutical compositions and vaccines may be administered either prior to or following surgical removal of primary tumors and/or treatment such as administration of radiotherapy or conventional chemotherapeutic drugs.

Within certain embodiments, immunotherapy may be active immunotherapy, in which treatment relies on the *in vivo* stimulation of the endogenous host immune system to react against tumors with the administration of immune response-modifying agents (such as polypeptides and polynucleotides disclosed herein).

Within other embodiments, immunotherapy may be passive immunotherapy, in which treatment involves the delivery of agents with established tumor-immune reactivity (such as effector cells or antibodies) that can directly or indirectly mediate antitumor effects and does not necessarily depend on an intact host immune system. Examples of effector cells include T cells as discussed above, T lymphocytes (such as CD8⁺ cytotoxic T lymphocytes and CD4⁺ T-helper tumor-infiltrating lymphocytes), killer cells (such as Natural Killer cells and lymphokine-activated killer cells), B cells and antigen-presenting cells (such as dendritic cells and macrophages) expressing a polypeptide provided herein. T cell receptors and antibody receptors specific for the polypeptides recited herein may be cloned, expressed and transferred into other vectors or effector cells for adoptive immunotherapy. The polypeptides provided herein may also be used to generate antibodies or anti-idiotypic antibodies (as described above and in U.S. Patent No. 4,918,164) for passive immunotherapy.

Effector cells may generally be obtained in sufficient quantities for adoptive immunotherapy by growth *in vitro*, as described herein. Culture conditions for expanding single antigen-specific effector cells to several billion in number with retention of antigen recognition *in vivo* are well known in the art. Such *in vitro* culture conditions typically use intermittent stimulation with antigen, often in the presence of cytokines (such as IL-2) and non-dividing feeder cells. As noted above, immunoreactive polypeptides as provided herein

may be used to rapidly expand antigen-specific T cell cultures in order to generate a sufficient number of cells for immunotherapy. In particular, antigen-presenting cells, such as dendritic, macrophage, monocyte, fibroblast or B cells, may be pulsed with immunoreactive polypeptides or transfected with one or more polynucleotides using standard techniques well known in the art. For example, antigen-presenting cells can be transfected with a polynucleotide having a promoter appropriate for increasing expression in a recombinant virus or other expression system. Cultured effector cells for use in therapy must be able to grow and distribute widely, and to survive long term *in vivo*. Studies have shown that cultured effector cells can be induced to grow *in vivo* and to survive long term in substantial numbers by repeated stimulation with antigen supplemented with IL-2 (*see, for example, Cheever et al., Immunological Reviews 157:177, 1997*).

Alternatively, a vector expressing a polypeptide recited herein may be introduced into antigen presenting cells taken from a patient and clonally propagated *ex vivo* for transplant back into the same patient. Transfected cells may be reintroduced into the patient using any means known in the art, preferably in sterile form by intravenous, intracavitary, intraperitoneal or intratumor administration.

Routes and frequency of administration of the therapeutic compositions disclosed herein, as well as dosage, will vary from individual to individual, and may be readily established using standard techniques. In general, the pharmaceutical compositions and vaccines may be administered by injection (*e.g.*, intracutaneous, intramuscular, intravenous or subcutaneous), intranasally (*e.g.*, by aspiration) or orally. Preferably, between 1 and 10 doses may be administered over a 52 week period. Preferably, 6 doses are administered, at intervals of 1 month, and booster vaccinations may be given periodically thereafter. Alternate protocols may be appropriate for individual patients. A suitable dose is an amount of a compound that, when administered as described above, is capable of promoting an anti-tumor immune response, and is at least 10-50% above the basal (*i.e.*, untreated) level. Such response can be monitored by measuring the anti-tumor antibodies in a patient or by vaccine-dependent generation of cytolytic effector cells capable of killing the patient's tumor cells *in vitro*. Such vaccines should also be capable of causing an immune response that leads to an improved clinical outcome (*e.g.*, more frequent remissions, complete or partial or longer disease-free survival) in vaccinated patients as compared to non-vaccinated patients. In general, for pharmaceutical compositions and vaccines comprising one or more polypeptides, the amount of each polypeptide present in a dose ranges from about 100 µg to 5 mg per kg of host. Suitable dose sizes will vary with the size of the patient, but will typically range from about 0.1 mL to about 5 mL.

In general, an appropriate dosage and treatment regimen provides the active compound(s) in an amount sufficient to provide therapeutic and/or prophylactic benefit. Such

a response can be monitored by establishing an improved clinical outcome (*e.g.*, more frequent remissions, complete or partial, or longer disease-free survival) in treated patients as compared to non-treated patients. Increases in preexisting immune responses to a prostate tumor protein generally correlate with an improved clinical outcome. Such immune responses may generally be evaluated using standard proliferation, cytotoxicity or cytokine assays, which may be performed using samples obtained from a patient before and after treatment.

METHODS FOR DETECTING CANCER

In general, a cancer may be detected in a patient based on the presence of one or more prostate tumor proteins and/or polynucleotides encoding such proteins in a biological sample (for example, blood, sera, urine and/or tumor biopsies) obtained from the patient. In other words, such proteins may be used as markers to indicate the presence or absence of a cancer such as prostate cancer. In addition, such proteins may be useful for the detection of other cancers. The binding agents provided herein generally permit detection of the level of antigen that binds to the agent in the biological sample. Polynucleotide primers and probes may be used to detect the level of mRNA encoding a tumor protein, which is also indicative of the presence or absence of a cancer. In general, a prostate tumor sequence should be present at a level that is at least three fold higher in tumor tissue than in normal tissue

There are a variety of assay formats known to those of ordinary skill in the art for using a binding agent to detect polypeptide markers in a sample. *See, e.g.*, Harlow and Lane, *Antibodies: A Laboratory Manual*, Cold Spring Harbor Laboratory, 1988. In general, the presence or absence of a cancer in a patient may be determined by (a) contacting a biological sample obtained from a patient with a binding agent; (b) detecting in the sample a level of polypeptide that binds to the binding agent; and (c) comparing the level of polypeptide with a predetermined cut-off value.

In a preferred embodiment, the assay involves the use of binding agent immobilized on a solid support to bind to and remove the polypeptide from the remainder of the sample. The bound polypeptide may then be detected using a detection reagent that contains a reporter group and specifically binds to the binding agent/polypeptide complex. Such detection reagents may comprise, for example, a binding agent that specifically binds to the polypeptide or an antibody or other agent that specifically binds to the binding agent, such as an anti-immunoglobulin, protein G, protein A or a lectin. Alternatively, a competitive assay may be utilized, in which a polypeptide is labeled with a reporter group and allowed to bind to the immobilized binding agent after incubation of the binding agent with the sample. The extent to which components of the sample inhibit the binding of the labeled polypeptide to the binding agent is indicative of the reactivity of the sample with the immobilized binding

agent. Suitable polypeptides for use within such assays include full length prostate tumor proteins and portions thereof to which the binding agent binds, as described above.

The solid support may be any material known to those of ordinary skill in the art to which the tumor protein may be attached. For example, the solid support may be a test well in a microtiter plate or a nitrocellulose or other suitable membrane. Alternatively, the support may be a bead or disc, such as glass, fiberglass, latex or a plastic material such as polystyrene or polyvinylchloride. The support may also be a magnetic particle or a fiber optic sensor, such as those disclosed, for example, in U.S. Patent No. 5,359,681. The binding agent may be immobilized on the solid support using a variety of techniques known to those of skill in the art, which are amply described in the patent and scientific literature. In the context of the present invention, the term "immobilization" refers to both noncovalent association, such as adsorption, and covalent attachment (which may be a direct linkage between the agent and functional groups on the support or may be a linkage by way of a cross-linking agent). Immobilization by adsorption to a well in a microtiter plate or to a membrane is preferred. In such cases, adsorption may be achieved by contacting the binding agent, in a suitable buffer, with the solid support for a suitable amount of time. The contact time varies with temperature, but is typically between about 1 hour and about 1 day. In general, contacting a well of a plastic microtiter plate (such as polystyrene or polyvinylchloride) with an amount of binding agent ranging from about 10 ng to about 10 μ g, and preferably about 100 ng to about 1 μ g, is sufficient to immobilize an adequate amount of binding agent.

Covalent attachment of binding agent to a solid support may generally be achieved by first reacting the support with a bifunctional reagent that will react with both the support and a functional group, such as a hydroxyl or amino group, on the binding agent. For example, the binding agent may be covalently attached to supports having an appropriate polymer coating using benzoquinone or by condensation of an aldehyde group on the support with an amine and an active hydrogen on the binding partner (*see, e.g.,* Pierce Immunotechnology Catalog and Handbook, 1991, at A12-A13).

In certain embodiments, the assay is a two-antibody sandwich assay. This assay may be performed by first contacting an antibody that has been immobilized on a solid support, commonly the well of a microtiter plate, with the sample, such that polypeptides within the sample are allowed to bind to the immobilized antibody. Unbound sample is then removed from the immobilized polypeptide-antibody complexes and a detection reagent (preferably a second antibody capable of binding to a different site on the polypeptide) containing a reporter group is added. The amount of detection reagent that remains bound to the solid support is then determined using a method appropriate for the specific reporter group.

More specifically, once the antibody is immobilized on the support as described above, the remaining protein binding sites on the support are typically blocked. Any suitable blocking agent known to those of ordinary skill in the art, such as bovine serum albumin or Tween 20™ (Sigma Chemical Co., St. Louis, MO). The immobilized antibody is then incubated with the sample, and polypeptide is allowed to bind to the antibody. The sample may be diluted with a suitable diluent, such as phosphate-buffered saline (PBS) prior to incubation. In general, an appropriate contact time (*i.e.*, incubation time) is a period of time that is sufficient to detect the presence of polypeptide within a sample obtained from an individual with prostate cancer. Preferably, the contact time is sufficient to achieve a level of binding that is at least about 95% of that achieved at equilibrium between bound and unbound polypeptide. Those of ordinary skill in the art will recognize that the time necessary to achieve equilibrium may be readily determined by assaying the level of binding that occurs over a period of time. At room temperature, an incubation time of about 30 minutes is generally sufficient.

Unbound sample may then be removed by washing the solid support with an appropriate buffer, such as PBS containing 0.1% Tween 20™. The second antibody, which contains a reporter group, may then be added to the solid support. Preferred reporter groups include those groups recited above.

The detection reagent is then incubated with the immobilized antibody-polypeptide complex for an amount of time sufficient to detect the bound polypeptide. An appropriate amount of time may generally be determined by assaying the level of binding that occurs over a period of time. Unbound detection reagent is then removed and bound detection reagent is detected using the reporter group. The method employed for detecting the reporter group depends upon the nature of the reporter group. For radioactive groups, scintillation counting or autoradiographic methods are generally appropriate. Spectroscopic methods may be used to detect dyes, luminescent groups and fluorescent groups. Biotin may be detected using avidin, coupled to a different reporter group (commonly a radioactive or fluorescent group or an enzyme). Enzyme reporter groups may generally be detected by the addition of substrate (generally for a specific period of time), followed by spectroscopic or other analysis of the reaction products.

To determine the presence or absence of a cancer, such as prostate cancer, the signal detected from the reporter group that remains bound to the solid support is generally compared to a signal that corresponds to a predetermined cut-off value. In one preferred embodiment, the cut-off value for the detection of a cancer is the average mean signal obtained when the immobilized antibody is incubated with samples from patients without the cancer. In general, a sample generating a signal that is three standard deviations above the predetermined cut-off value is considered positive for the cancer. In an alternate preferred

embodiment, the cut-off value is determined using a Receiver Operator Curve, according to the method of Sackett et al., *Clinical Epidemiology: A Basic Science for Clinical Medicine*, Little Brown and Co., 1985, p. 106-7. Briefly, in this embodiment, the cut-off value may be determined from a plot of pairs of true positive rates (*i.e.*, sensitivity) and false positive rates (100%-specificity) that correspond to each possible cut-off value for the diagnostic test result. The cut-off value on the plot that is the closest to the upper left-hand corner (*i.e.*, the value that encloses the largest area) is the most accurate cut-off value, and a sample generating a signal that is higher than the cut-off value determined by this method may be considered positive. Alternatively, the cut-off value may be shifted to the left along the plot, to minimize the false positive rate, or to the right, to minimize the false negative rate. In general, a sample generating a signal that is higher than the cut-off value determined by this method is considered positive for a cancer.

In a related embodiment, the assay is performed in a flow-through or strip test format, wherein the binding agent is immobilized on a membrane, such as nitrocellulose. In the flow-through test, polypeptides within the sample bind to the immobilized binding agent as the sample passes through the membrane. A second, labeled binding agent then binds to the binding agent-polypeptide complex as a solution containing the second binding agent flows through the membrane. The detection of bound second binding agent may then be performed as described above. In the strip test format, one end of the membrane to which binding agent is bound is immersed in a solution containing the sample. The sample migrates along the membrane through a region containing second binding agent and to the area of immobilized binding agent. Concentration of second binding agent at the area of immobilized antibody indicates the presence of a cancer. Typically, the concentration of second binding agent at that site generates a pattern, such as a line, that can be read visually. The absence of such a pattern indicates a negative result. In general, the amount of binding agent immobilized on the membrane is selected to generate a visually discernible pattern when the biological sample contains a level of polypeptide that would be sufficient to generate a positive signal in the two-antibody sandwich assay, in the format discussed above. Preferred binding agents for use in such assays are antibodies and antigen-binding fragments thereof. Preferably, the amount of antibody immobilized on the membrane ranges from about 25 ng to about 1 μ g, and more preferably from about 50 ng to about 500 ng. Such tests can typically be performed with a very small amount of biological sample.

Of course, numerous other assay protocols exist that are suitable for use with the tumor proteins or binding agents of the present invention. The above descriptions are intended to be exemplary only. For example, it will be apparent to those of ordinary skill in the art that the above protocols may be readily modified to use prostate tumor polypeptides to

detect antibodies that bind to such polypeptides in a biological sample. The detection of such prostate tumor protein specific antibodies may correlate with the presence of a cancer.

A cancer may also, or alternatively, be detected based on the presence of T cells that specifically react with a prostate tumor protein in a biological sample. Within certain methods, a biological sample comprising CD4⁺ and/or CD8⁺ T cells isolated from a patient is incubated with a prostate tumor polypeptide, a polynucleotide encoding such a polypeptide and/or an APC that expresses at least an immunogenic portion of such a polypeptide, and the presence or absence of specific activation of the T cells is detected. Suitable biological samples include, but are not limited to, isolated T cells. For example, T cells may be isolated from a patient by routine techniques (such as by Ficoll/Hypaque density gradient centrifugation of peripheral blood lymphocytes). T cells may be incubated *in vitro* for 2-9 days (typically 4 days) at 37°C with prostate tumor polypeptide (*e.g.*, 5 - 25 µg/ml). It may be desirable to incubate another aliquot of a T cell sample in the absence of prostate tumor polypeptide to serve as a control. For CD4⁺ T cells, activation is preferably detected by evaluating proliferation of the T cells. For CD8⁺ T cells, activation is preferably detected by evaluating cytolytic activity. A level of proliferation that is at least two fold greater and/or a level of cytolytic activity that is at least 20% greater than in disease-free patients indicates the presence of a cancer in the patient.

As noted above, a cancer may also, or alternatively, be detected based on the level of mRNA encoding a prostate tumor protein in a biological sample. For example, at least two oligonucleotide primers may be employed in a polymerase chain reaction (PCR) based assay to amplify a portion of a prostate tumor cDNA derived from a biological sample, wherein at least one of the oligonucleotide primers is specific for (*i.e.*, hybridizes to) a polynucleotide encoding the prostate tumor protein. The amplified cDNA is then separated and detected using techniques well known in the art, such as gel electrophoresis. Similarly, oligonucleotide probes that specifically hybridize to a polynucleotide encoding a prostate tumor protein may be used in a hybridization assay to detect the presence of polynucleotide encoding the tumor protein in a biological sample.

To permit hybridization under assay conditions, oligonucleotide primers and probes should comprise an oligonucleotide sequence that has at least about 60%, preferably at least about 75% and more preferably at least about 90%, identity to a portion of a polynucleotide encoding a prostate tumor protein that is at least 10 nucleotides, and preferably at least 20 nucleotides, in length. Preferably, oligonucleotide primers and/or probes will hybridize to a polynucleotide encoding a polypeptide disclosed herein under moderately stringent conditions, as defined above. Oligonucleotide primers and/or probes which may be usefully employed in the diagnostic methods described herein preferably are at least 10-40 nucleotides in length. In a preferred embodiment, the oligonucleotide primers

comprise at least 10 contiguous nucleotides, more preferably at least 15 contiguous nucleotides, of a DNA molecule having a sequence recited in SEQ ID NO: 1-111, 115-171, 173-175, 177, 179-305, 307-315, 326, 328, 330, 332-335, 340-375 and 381. Techniques for both PCR based assays and hybridization assays are well known in the art (*see*, for example, Mullis et al., *Cold Spring Harbor Symp. Quant. Biol.*, 51:263, 1987; Erlich ed., *PCR Technology*, Stockton Press, NY, 1989).

One preferred assay employs RT-PCR, in which PCR is applied in conjunction with reverse transcription. Typically, RNA is extracted from a biological sample, such as biopsy tissue, and is reverse transcribed to produce cDNA molecules. PCR amplification using at least one specific primer generates a cDNA molecule, which may be separated and visualized using, for example, gel electrophoresis. Amplification may be performed on biological samples taken from a test patient and from an individual who is not afflicted with a cancer. The amplification reaction may be performed on several dilutions of cDNA spanning two orders of magnitude. A two-fold or greater increase in expression in several dilutions of the test patient sample as compared to the same dilutions of the non-cancerous sample is typically considered positive.

In another embodiment, the disclosed compositions may be used as markers for the progression of cancer. In this embodiment, assays as described above for the diagnosis of a cancer may be performed over time, and the change in the level of reactive polypeptide(s) or polynucleotide evaluated. For example, the assays may be performed every 24-72 hours for a period of 6 months to 1 year, and thereafter performed as needed. In general, a cancer is progressing in those patients in whom the level of polypeptide or polynucleotide detected increases over time. In contrast, the cancer is not progressing when the level of reactive polypeptide or polynucleotide either remains constant or decreases with time.

Certain *in vivo* diagnostic assays may be performed directly on a tumor. One such assay involves contacting tumor cells with a binding agent. The bound binding agent may then be detected directly or indirectly via a reporter group. Such binding agents may also be used in histological applications. Alternatively, polynucleotide probes may be used within such applications.

As noted above, to improve sensitivity, multiple prostate tumor protein markers may be assayed within a given sample. It will be apparent that binding agents specific for different proteins provided herein may be combined within a single assay. Further, multiple primers or probes may be used concurrently. The selection of tumor protein markers may be based on routine experiments to determine combinations that results in optimal sensitivity. In addition, or alternatively, assays for tumor proteins provided herein may be combined with assays for other known tumor antigens.

DIAGNOSTIC KITS

The present invention further provides kits for use within any of the above diagnostic methods. Such kits typically comprise two or more components necessary for performing a diagnostic assay. Components may be compounds, reagents, containers and/or equipment. For example, one container within a kit may contain a monoclonal antibody or fragment thereof that specifically binds to a prostate tumor protein. Such antibodies or fragments may be provided attached to a support material, as described above. One or more additional containers may enclose elements, such as reagents or buffers, to be used in the assay. Such kits may also, or alternatively, contain a detection reagent as described above that contains a reporter group suitable for direct or indirect detection of antibody binding.

Alternatively, a kit may be designed to detect the level of mRNA encoding a prostate tumor protein in a biological sample. Such kits generally comprise at least one oligonucleotide probe or primer, as described above, that hybridizes to a polynucleotide encoding a prostate tumor protein. Such an oligonucleotide may be used, for example, within a PCR or hybridization assay. Additional components that may be present within such kits include a second oligonucleotide and/or a diagnostic reagent or container to facilitate the detection of a polynucleotide encoding a prostate tumor protein.

The following Examples are offered by way of illustration and not by way of limitation.

EXAMPLES

EXAMPLE 1

ISOLATION AND CHARACTERIZATION OF PROSTATE TUMOR POLYPEPTIDES

This Example describes the isolation of certain prostate tumor polypeptides from a prostate tumor cDNA library.

A human prostate tumor cDNA expression library was constructed from prostate tumor poly A⁺ RNA using a Superscript Plasmid System for cDNA Synthesis and Plasmid Cloning kit (BRL Life Technologies, Gaithersburg, MD 20897) following the manufacturer's protocol. Specifically, prostate tumor tissues were homogenized with polytron (Kinematica, Switzerland) and total RNA was extracted using Trizol reagent (BRL Life Technologies) as directed by the manufacturer. The poly A⁺ RNA was then purified using a Qiagen oligotex spin column mRNA purification kit (Qiagen, Santa Clarita, CA 91355) according to the manufacturer's protocol. First-strand cDNA was synthesized using the NotI/Oligo-dT18 primer. Double-stranded cDNA was synthesized, ligated with EcoRI/BAXI adaptors (Invitrogen, San Diego, CA) and digested with NotI. Following size fractionation with Chroma Spin-1000 columns (Clontech, Palo Alto, CA), the cDNA was ligated into the EcoRI/NotI site of pCDNA3.1 (Invitrogen) and transformed into ElectroMax *E. coli* DH10B cells (BRL Life Technologies) by electroporation.

Using the same procedure, a normal human pancreas cDNA expression library was prepared from a pool of six tissue specimens (Clontech). The cDNA libraries were characterized by determining the number of independent colonies, the percentage of clones that carried insert, the average insert size and by sequence analysis. The prostate tumor library contained 1.64×10^7 independent colonies, with 70% of clones having an insert and the average insert size being 1745 base pairs. The normal pancreas cDNA library contained 3.3×10^6 independent colonies, with 69% of clones having inserts and the average insert size being 1120 base pairs. For both libraries, sequence analysis showed that the majority of clones had a full length cDNA sequence and were synthesized from mRNA, with minimal rRNA and mitochondrial DNA contamination.

cDNA library subtraction was performed using the above prostate tumor and normal pancreas cDNA libraries, as described by Hara *et al.* (*Blood*, 84:189-199, 1994) with some modifications. Specifically, a prostate tumor-specific subtracted cDNA library was generated as follows. Normal pancreas cDNA library (70 μ g) was digested with EcoRI, NotI, and SfuI, followed by a filling-in reaction with DNA polymerase Klenow fragment. After phenol-chloroform extraction and ethanol precipitation, the DNA was dissolved in 100 μ l of

H₂O, heat-denatured and mixed with 100 μ l (100 μ g) of Photoprobe biotin (Vector Laboratories, Burlingame, CA). As recommended by the manufacturer, the resulting mixture was irradiated with a 270 W sunlamp on ice for 20 minutes. Additional Photoprobe biotin (50 μ l) was added and the biotinylation reaction was repeated. After extraction with butanol five times, the DNA was ethanol-precipitated and dissolved in 23 μ l H₂O to form the driver DNA.

To form the tracer DNA, 10 μ g prostate tumor cDNA library was digested with BamHI and XhoI, phenol chloroform extracted and passed through Chroma spin-400 columns (Clontech). Following ethanol precipitation, the tracer DNA was dissolved in 5 μ l H₂O. Tracer DNA was mixed with 15 μ l driver DNA and 20 μ l of 2 x hybridization buffer (1.5 M NaCl/10 mM EDTA/50 mM HEPES pH 7.5/0.2% sodium dodecyl sulfate), overlaid with mineral oil, and heat-denatured completely. The sample was immediately transferred into a 68 °C water bath and incubated for 20 hours (long hybridization [LH]). The reaction mixture was then subjected to a streptavidin treatment followed by phenol/chloroform extraction. This process was repeated three more times. Subtracted DNA was precipitated, dissolved in 12 μ l H₂O, mixed with 8 μ l driver DNA and 20 μ l of 2 x hybridization buffer, and subjected to a hybridization at 68 °C for 2 hours (short hybridization [SH]). After removal of biotinylated double-stranded DNA, subtracted cDNA was ligated into BamHI/XhoI site of chloramphenicol resistant pBCSK⁺ (Stratagene, La Jolla, CA 92037) and transformed into ElectroMax *E. coli* DH10B cells by electroporation to generate a prostate tumor specific subtracted cDNA library (referred to as "prostate subtraction 1").

To analyze the subtracted cDNA library, plasmid DNA was prepared from 100 independent clones, randomly picked from the subtracted prostate tumor specific library and grouped based on insert size. Representative cDNA clones were further characterized by DNA sequencing with a Perkin Elmer/Applied Biosystems Division Automated Sequencer Model 373A (Foster City, CA). Six cDNA clones, hereinafter referred to as F1-13, F1-12, F1-16, H1-1, H1-9 and H1-4, were shown to be abundant in the subtracted prostate-specific cDNA library. The determined 3' and 5' cDNA sequences for F1-12 are provided in SEQ ID NO: 2 and 3, respectively, with determined 3' cDNA sequences for F1-13, F1-16, H1-1, H1-9 and H1-4 being provided in SEQ ID NO: 1 and 4-7, respectively.

The cDNA sequences for the isolated clones were compared to known sequences in the gene bank using the EMBL and GenBank databases (release 96). Four of the prostate tumor cDNA clones, F1-13, F1-16, H1-1, and H1-4, were determined to encode the following previously identified proteins: prostate specific antigen (PSA), human glandular kallikrein, human tumor expression enhanced gene, and mitochondria cytochrome C oxidase subunit II. H1-9 was found to be identical to a previously identified human

autonomously replicating sequence. No significant homologies to the cDNA sequence for F1-12 were found.

Subsequent studies led to the isolation of a full-length cDNA sequence for F1-12. This sequence is provided in SEQ ID NO: 107, with the corresponding predicted amino acid sequence being provided in SEQ ID NO: 108.

To clone less abundant prostate tumor specific genes, cDNA library subtraction was performed by subtracting the prostate tumor cDNA library described above with the normal pancreas cDNA library and with the three most abundant genes in the previously subtracted prostate tumor specific cDNA library: human glandular kallikrein, prostate specific antigen (PSA), and mitochondria cytochrome C oxidase subunit II. Specifically, 1 µg each of human glandular kallikrein, PSA and mitochondria cytochrome C oxidase subunit II cDNAs in pCDNA3.1 were added to the driver DNA and subtraction was performed as described above to provide a second subtracted cDNA library hereinafter referred to as the "subtracted prostate tumor specific cDNA library with spike".

Twenty-two cDNA clones were isolated from the subtracted prostate tumor specific cDNA library with spike. The determined 3' and 5' cDNA sequences for the clones referred to as J1-17, L1-12, N1-1862, J1-13, J1-19, J1-25, J1-24, K1-58, K1-63, L1-4 and L1-14 are provided in SEQ ID NOS: 8-9, 10-11, 12-13, 14-15, 16-17, 18-19, 20-21, 22-23, 24-25, 26-27 and 28-29, respectively. The determined 3' cDNA sequences for the clones referred to as J1-12, J1-16, J1-21, K1-48, K1-55, L1-2, L1-6, N1-1858, N1-1860, N1-1861, N1-1864 are provided in SEQ ID NOS: 30-40, respectively. Comparison of these sequences with those in the gene bank as described above, revealed no significant homologies to three of the five most abundant DNA species, (J1-17, L1-12 and N1-1862; SEQ ID NOS: 8-9, 10-11 and 12-13, respectively). Of the remaining two most abundant species, one (J1-12; SEQ ID NO:30) was found to be identical to the previously identified human pulmonary surfactant-associated protein, and the other (K1-48; SEQ ID NO:33) was determined to have some homology to *R. norvegicus* mRNA for 2-arylpropionyl-CoA epimerase. Of the 17 less abundant cDNA clones isolated from the subtracted prostate tumor specific cDNA library with spike, four (J1-16, K1-55, L1-6 and N1-1864; SEQ ID NOS:31, 34, 36 and 40, respectively) were found to be identical to previously identified sequences, two (J1-21 and N1-1860; SEQ ID NOS: 32 and 38, respectively) were found to show some homology to non-human sequences, and two (L1-2 and N1-1861; SEQ ID NOS: 35 and 39, respectively) were found to show some homology to known human sequences. No significant homologies were found to the polypeptides J1-13, J1-19, J1-24, J1-25, K1-58, K1-63, L1-4, L1-14 (SEQ ID NOS: 14-15, 16-17, 20-21, 18-19, 22-23, 24-25, 26-27, 28-29, respectively).

Subsequent studies led to the isolation of full length cDNA sequences for J1-17, L1-12 and N1-1862 (SEQ ID NOS: 109-111, respectively). The corresponding predicted

amino acid sequences are provided in SEQ ID NOS: 112-114. L1-12 is also referred to as P501S.

In a further experiment, four additional clones were identified by subtracting a prostate tumor cDNA library with normal prostate cDNA prepared from a pool of three normal prostate poly A+ RNA (referred to as "prostate subtraction 2"). The determined cDNA sequences for these clones, hereinafter referred to as U1-3064, U1-3065, V1-3692 and 1A-3905, are provided in SEQ ID NO: 69-72, respectively. Comparison of the determined sequences with those in the gene bank revealed no significant homologies to U1-3065.

A second subtraction with spike (referred to as "prostate subtraction spike 2") was performed by subtracting a prostate tumor specific cDNA library with spike with normal pancreas cDNA library and further spiked with PSA, J1-17, pulmonary surfactant-associated protein, mitochondrial DNA, cytochrome c oxidase subunit II, N1-1862, autonomously replicating sequence, L1-12 and tumor expression enhanced gene. Four additional clones, hereinafter referred to as V1-3686, R1-2330, 1B-3976 and V1-3679, were isolated. The determined cDNA sequences for these clones are provided in SEQ ID NO: 73-76, respectively. Comparison of these sequences with those in the gene bank revealed no significant homologies to V1-3686 and R1-2330.

Further analysis of the three prostate subtractions described above (prostate subtraction 2, subtracted prostate tumor specific cDNA library with spike, and prostate subtraction spike 2) resulted in the identification of sixteen additional clones, referred to as 1G-4736, 1G-4738, 1G-4741, 1G-4744, 1G-4734, 1H-4774, 1H-4781, 1H-4785, 1H-4787, 1H-4796, 1I-4810, 1I-4811, 1J-4876, 1K-4884 and 1K-4896. The determined cDNA sequences for these clones are provided in SEQ ID NOS: 77-92, respectively. Comparison of these sequences with those in the gene bank as described above, revealed no significant homologies to 1G-4741, 1G-4734, 1I-4807, 1J-4876 and 1K-4896 (SEQ ID NOS: 79, 81, 87, 90 and 92, respectively). Further analysis of the isolated clones led to the determination of extended cDNA sequences for 1G-4736, 1G-4738, 1G-4741, 1G-4744, 1H-4774, 1H-4781, 1H-4785, 1H-4787, 1H-4796, 1I-4807, 1J-4876, 1K-4884 and 1K-4896, provided in SEQ ID NOS: 179-188 and 191-193, respectively, and to the determination of additional partial cDNA sequences for 1I-4810 and 1I-4811, provided in SEQ ID NOS: 189 and 190, respectively.

Additional studies with prostate subtraction spike 2 resulted in the isolation of three more clones. Their sequences were determined as described above and compared to the most recent GenBank. All three clones were found to have homology to known genes, which are Cysteine-rich protein, KIAA0242, and KIAA0280 (SEQ ID NO: 317, 319, and 320, respectively). Further analysis of these clones by Synteni microarray (Synteni, Palo Alto, CA) demonstrated that all three clones were over-expressed in most prostate tumors and

prostate BPH, as well as in the majority of normal prostate tissues tested, but low expression in all other normal tissues.

An additional subtraction was performed by subtracting a normal prostate cDNA library with normal pancreas cDNA (referred to as "prostate subtraction 3"). This led to the identification of six additional clones referred to as 1G-4761, 1G-4762, 1H-4766, 1H-4770, 1H-4771 and 1H-4772 (SEQ ID NOS: 93-98). Comparison of these sequences with those in the gene bank revealed no significant homologies to 1G-4761 and 1H-4771 (SEQ ID NOS: 93 and 97, respectively). Further analysis of the isolated clones led to the determination of extended cDNA sequences for 1G-4761, 1G-4762, 1H-4766 and 1H-4772 provided in SEQ ID NOS: 194-196 and 199, respectively, and to the determination of additional partial cDNA sequences for 1H-4770 and 1H-4771, provided in SEQ ID NOS: 197 and 198, respectively.

Subtraction of a prostate tumor cDNA library, prepared from a pool of polyA+ RNA from three prostate cancer patients, with a normal pancreas cDNA library (prostate subtraction 4) led to the identification of eight clones, referred to as 1D-4297, 1D-4309, 1D.1-4278, 1D-4288, 1D-4283, 1D-4304, 1D-4296 and 1D-4280 (SEQ ID NOS: 99-107). These sequences were compared to those in the gene bank as described above. No significant homologies were found to 1D-4283 and 1D-4304 (SEQ ID NOS: 103 and 104, respectively). Further analysis of the isolated clones led to the determination of extended cDNA sequences for 1D-4309, 1D.1-4278, 1D-4288, 1D-4283, 1D-4304, 1D-4296 and 1D-4280, provided in SEQ ID NOS: 200-206, respectively.

cDNA clones isolated in prostate subtraction 1 and prostate subtraction 2, described above, were colony PCR amplified and their mRNA expression levels in prostate tumor, normal prostate and in various other normal tissues were determined using microarray technology (Synteni, Palo Alto, CA). Briefly, the PCR amplification products were dotted onto slides in an array format, with each product occupying a unique location in the array. mRNA was extracted from the tissue sample to be tested, reverse transcribed, and fluorescent-labeled cDNA probes were generated. The microarrays were probed with the labeled cDNA probes, the slides scanned and fluorescence intensity was measured. This intensity correlates with the hybridization intensity. Two clones (referred to as P509S and P510S) were found to be over-expressed in prostate tumor and normal prostate and expressed at low levels in all other normal tissues tested (liver, pancreas, skin, bone marrow, brain, breast, adrenal gland, bladder, testes, salivary gland, large intestine, kidney, ovary, lung, spinal cord, skeletal muscle and colon). The determined cDNA sequences for P509S and P510S are provided in SEQ ID NO: 223 and 224, respectively. Comparison of these sequences with those in the gene bank as described above, revealed some homology to previously identified ESTs.

Additional, studies led to the isolation of the full-length cDNA sequence for P509S. This sequence is provided in SEQ ID NO: 332, with the corresponding predicted amino acid sequence being provided in SEQ ID NO: 339.

EXAMPLE 2

DETERMINATION OF TISSUE SPECIFICITY OF PROSTATE TUMOR POLYPEPTIDES

Using gene specific primers, mRNA expression levels for the representative prostate tumor polypeptides F1-16, H1-1, J1-17 (also referred to as P502S), L1-12 (also referred to as P501S), F1-12 (also referred to as P504S) and N1-1862 (also referred to as P503S) were examined in a variety of normal and tumor tissues using RT-PCR.

Briefly, total RNA was extracted from a variety of normal and tumor tissues using Trizol reagent as described above. First strand synthesis was carried out using 1-2 μ g of total RNA with SuperScript II reverse transcriptase (BRL Life Technologies) at 42 °C for one hour. The cDNA was then amplified by PCR with gene-specific primers. To ensure the semi-quantitative nature of the RT-PCR, β -actin was used as an internal control for each of the tissues examined. First, serial dilutions of the first strand cDNAs were prepared and RT-PCR assays were performed using β -actin specific primers. A dilution was then chosen that enabled the linear range amplification of the β -actin template and which was sensitive enough to reflect the differences in the initial copy numbers. Using these conditions, the β -actin levels were determined for each reverse transcription reaction from each tissue. DNA contamination was minimized by DNase treatment and by assuring a negative PCR result when using first strand cDNA that was prepared without adding reverse transcriptase.

mRNA Expression levels were examined in four different types of tumor tissue (prostate tumor from 2 patients, breast tumor from 3 patients, colon tumor, lung tumor), and sixteen different normal tissues, including prostate, colon, kidney, liver, lung, ovary, pancreas, skeletal muscle, skin, stomach, testes, bone marrow and brain. F1-16 was found to be expressed at high levels in prostate tumor tissue, colon tumor and normal prostate, and at lower levels in normal liver, skin and testes, with expression being undetectable in the other tissues examined. H1-1 was found to be expressed at high levels in prostate tumor, lung tumor, breast tumor, normal prostate, normal colon and normal brain, at much lower levels in normal lung, pancreas, skeletal muscle, skin, small intestine, bone marrow, and was not detected in the other tissues tested. J1-17 (P502S) and L1-12 (P501S) appear to be specifically over-expressed in prostate, with both genes being expressed at high levels in prostate tumor and normal prostate but at low to undetectable levels in all the other tissues examined. N1-1862 (P503S) was found to be over-expressed in 60% of prostate tumors and detectable in normal colon and kidney. The RT-PCR results thus indicate that

F1-16, H1-1, J1-17 (P502S), N1-1862 (P503S) and L1-12 (P501S) are either prostate specific or are expressed at significantly elevated levels in prostate.

Further RT-PCR studies showed that F1-12 (P504S) is over-expressed in 60% of prostate tumors, detectable in normal kidney but not detectable in all other tissues tested. Similarly, R1-2330 was shown to be over-expressed in 40% of prostate tumors, detectable in normal kidney and liver, but not detectable in all other tissues tested. U1-3064 was found to be over-expressed in 60% of prostate tumors, and also expressed in breast and colon tumors, but was not detectable in normal tissues.

RT-PCR characterization of R1-2330, U1-3064 and 1D-4279 showed that these three antigens are over-expressed in prostate and/or prostate tumors.

Northern analysis with four prostate tumors, two normal prostate samples, two BPH prostates, and normal colon, kidney, liver, lung, pancreas, skeletal muscle, brain, stomach, testes, small intestine and bone marrow, showed that L1-12 (P501S) is over-expressed in prostate tumors and normal prostate, while being undetectable in other normal tissues tested. J1-17 (P502S) was detected in two prostate tumors and not in the other tissues tested. N1-1862 (P503S) was found to be over-expressed in three prostate tumors and to be expressed in normal prostate, colon and kidney, but not in other tissues tested. F1-12 (P504S) was found to be highly expressed in two prostate tumors and to be undetectable in all other tissues tested.

The microarray technology described above was used to determine the expression levels of representative antigens described herein in prostate tumor, breast tumor and the following normal tissues: prostate, liver, pancreas, skin, bone marrow, brain, breast, adrenal gland, bladder, testes, salivary gland, large intestine, kidney, ovary, lung, spinal cord, skeletal muscle and colon. L1-12 (P501S) was found to be over-expressed in normal prostate and prostate tumor, with some expression being detected in normal skeletal muscle. Both J1-12 and F1-12 (P504S) were found to be over-expressed in prostate tumor, with expression being lower or undetectable in all other tissues tested. N1-1862 (P503S) was found to be expressed at high levels in prostate tumor and normal prostate, and at low levels in normal large intestine and normal colon, with expression being undetectable in all other tissues tested. R1-2330 was found to be over-expressed in prostate tumor and normal prostate, and to be expressed at lower levels in all other tissues tested. 1D-4279 was found to be over-expressed in prostate tumor and normal prostate, expressed at lower levels in normal spinal cord, and to be undetectable in all other tissues tested.

Further microarray analysis to specifically address the extent to which P501S (SEQ ID NO: 110) was expressed in breast tumor revealed moderate over-expression not only in breast tumor, but also in metastatic breast tumor (2/31), with negligible to low expression

in normal tissues. This data suggests that P501S may be over-expressed in various breast tumors as well as in prostate tumors.

The expression levels of 32 ESTs (expressed sequence tags) described by Vasmatazis *et al.* (*Proc. Natl. Acad. Sci. USA* 95:300-304, 1998) in a variety of tumor and normal tissues were examined by microarray technology as described above. Two of these clones (referred to as P1000C and P1001C) were found to be over-expressed in prostate tumor and normal prostate, and expressed at low to undetectable levels in all other tissues tested (normal aorta, thymus, resting and activated PBMC, epithelial cells, spinal cord, adrenal gland, fetal tissues, skin, salivary gland, large intestine, bone marrow, liver, lung, dendritic cells, stomach, lymph nodes, brain, heart, small intestine, skeletal muscle, colon and kidney. The determined cDNA sequences for P1000C and P1001C are provided in SEQ ID NO: 384 and 472, respectively. The sequence of P1001C was found to show some homology to the previously isolated Human mRNA for JM27 protein. No significant homologies were found to the sequence of P1000C.

The expression of the polypeptide encoded by the full length cDNA sequence for F1-12 (also referred to as P504S; SEQ ID NO: 108) was investigated by immunohistochemical analysis. Rabbit-anti-P504S polyclonal antibodies were generated against the full length P504S protein by standard techniques. Subsequent isolation and characterization of the polyclonal antibodies were also performed by techniques well known in the art. Immunohistochemical analysis showed that the P504S polypeptide was expressed in 100% of prostate carcinoma samples tested (n=5).

The rabbit-anti-P504S polyclonal antibody did not appear to label benign prostate cells with the same cytoplasmic granular staining, but rather with light nuclear staining. Analysis of normal tissues revealed that the encoded polypeptide was found to be expressed in some, but not all normal human tissues. Positive cytoplasmic staining with rabbit-anti-P504S polyclonal antibody was found in normal human kidney, liver, brain, colon and lung-associated macrophages, whereas heart and bone marrow were negative.

This data indicates that the P504S polypeptide is present in prostate cancer tissues, and that there are qualitative and quantitative differences in the staining between benign prostatic hyperplasia tissues and prostate cancer tissues, suggesting that this polypeptide may be detected selectively in prostate tumors and therefore be useful in the diagnosis of prostate cancer.

EXAMPLE 3

ISOLATION AND CHARACTERIZATION OF PROSTATE TUMOR POLYPEPTIDES BY PCR-BASED SUBTRACTION

A cDNA subtraction library, containing cDNA from normal prostate subtracted with ten other normal tissue cDNAs (brain, heart, kidney, liver, lung, ovary, placenta, skeletal muscle, spleen and thymus) and then submitted to a first round of PCR amplification, was purchased from Clontech. This library was subjected to a second round of PCR amplification, following the manufacturer's protocol. The resulting cDNA fragments were subcloned into the vector pT7 Blue T-vector (Novagen, Madison, WI) and transformed into XL-1 Blue MRF' *E. coli* (Stratagene). DNA was isolated from independent clones and sequenced using a Perkin Elmer/Applied Biosystems Division Automated Sequencer Model 373A.

Fifty-nine positive clones were sequenced. Comparison of the DNA sequences of these clones with those in the gene bank, as described above, revealed no significant homologies to 25 of these clones, hereinafter referred to as P5, P8, P9, P18, P20, P30, P34, P36, P38, P39, P42, P49, P50, P53, P55, P60, P64, P65, P73, P75, P76, P79 and P84. The determined cDNA sequences for these clones are provided in SEQ ID NO: 41-45, 47-52 and 54-65, respectively. P29, P47, P68, P80 and P82 (SEQ ID NO: 46, 53 and 66-68, respectively) were found to show some degree of homology to previously identified DNA sequences. To the best of the inventors' knowledge, none of these sequences have been previously shown to be present in prostate.

Further studies using the PCR-based methodology described above resulted in the isolation of more than 180 additional clones, of which 23 clones were found to show no significant homologies to known sequences. The determined cDNA sequences for these clones are provided in SEQ ID NO: 115-123, 127, 131, 137, 145, 147-151, 153, 156-158 and 160. Twenty-three clones (SEQ ID NO: 124-126, 128-130, 132-136, 138-144, 146, 152, 154, 155 and 159) were found to show some homology to previously identified ESTs. An additional ten clones (SEQ ID NO: 161-170) were found to have some degree of homology to known genes. Larger cDNA clones containing the P20 sequence represent splice variants of a gene referred to as P703P. The determined DNA sequence for the variants referred to as DE1, DE13 and DE14 are provided in SEQ ID NOS: 171, 175 and 177, respectively, with the corresponding predicted amino acid sequences being provided in SEQ ID NO: 172, 176 and 178, respectively. The determined cDNA sequence for an extended spliced form of P703 is provided in SEQ ID NO: 225. The DNA sequences for the splice variants referred to as DE2 and DE6 are provided in SEQ ID NOS: 173 and 174, respectively.

mRNA Expression levels for representative clones in tumor tissues (prostate (n=5), breast (n=2), colon and lung) normal tissues (prostate (n=5), colon, kidney, liver, lung (n=2), ovary (n=2), skeletal muscle, skin, stomach, small intestine and brain), and activated

and non-activated PBMC was determined by RT-PCR as described above. Expression was examined in one sample of each tissue type unless otherwise indicated.

P9 was found to be highly expressed in normal prostate and prostate tumor compared to all normal tissues tested except for normal colon which showed comparable expression. P20, a portion of the P703P gene, was found to be highly expressed in normal prostate and prostate tumor, compared to all twelve normal tissues tested. A modest increase in expression of P20 in breast tumor (n=2), colon tumor and lung tumor was seen compared to all normal tissues except lung (1 of 2). Increased expression of P18 was found in normal prostate, prostate tumor and breast tumor compared to other normal tissues except lung and stomach. A modest increase in expression of P5 was observed in normal prostate compared to most other normal tissues. However, some elevated expression was seen in normal lung and PBMC. Elevated expression of P5 was also observed in prostate tumors (2 of 5), breast tumor and one lung tumor sample. For P30, similar expression levels were seen in normal prostate and prostate tumor, compared to six of twelve other normal tissues tested. Increased expression was seen in breast tumors, one lung tumor sample and one colon tumor sample, and also in normal PBMC. P29 was found to be over-expressed in prostate tumor (5 of 5) and normal prostate (5 of 5) compared to the majority of normal tissues. However, substantial expression of P29 was observed in normal colon and normal lung (2 of 2). P80 was found to be over-expressed in prostate tumor (5 of 5) and normal prostate (5 of 5) compared to all other normal tissues tested, with increased expression also being seen in colon tumor.

Further studies resulted in the isolation of twelve additional clones, hereinafter referred to as 10-d8, 10-h10, 11-c8, 7-g6, 8-b5, 8-b6, 8-d4, 8-d9, 8-g3, 8-h11, 9-f12 and 9-f3. The determined DNA sequences for 10-d8, 10-h10, 11-c8, 8-d4, 8-d9, 8-h11, 9-f12 and 9-f3 are provided in SEQ ID NO: 207, 208, 209, 216, 217, 220, 221 and 222, respectively. The determined forward and reverse DNA sequences for 7-g6, 8-b5, 8-b6 and 8-g3 are provided in SEQ ID NO: 210 and 211; 212 and 213; 214 and 215; and 218 and 219, respectively. Comparison of these sequences with those in the gene bank revealed no significant homologies to the sequence of 9-f3. The clones 10-d8, 11-c8 and 8-h11 were found to show some homology to previously isolated ESTs, while 10-h10, 8-b5, 8-b6, 8-d4, 8-d9, 8-g3 and 9-f12 were found to show some homology to previously identified genes. Further characterization of 7-G6 and 8-G3 showed identity to the known genes PAP and PSA, respectively.

mRNA expression levels for these clones were determined using the micro-array technology described above. The clones 7-G6, 8-G3, 8-B5, 8-B6, 8-D4, 8-D9, 9-F3, 9-F12, 9-H3, 10-A2, 10-A4, 11-C9 and 11-F2 were found to be over-expressed in prostate tumor and normal prostate, with expression in other tissues tested being low or undetectable.

Increased expression of 8-F11 was seen in prostate tumor and normal prostate, bladder, skeletal muscle and colon. Increased expression of 10-H10 was seen in prostate tumor and normal prostate, bladder, lung, colon, brain and large intestine. Increased expression of 9-B1 was seen in prostate tumor, breast tumor, and normal prostate, salivary gland, large intestine and skin, with increased expression of 11-C8 being seen in prostate tumor, and normal prostate and large intestine.

An additional cDNA fragment derived from the PCR-based normal prostate subtraction, described above, was found to be prostate specific by both micro-array technology and RT-PCR. The determined cDNA sequence of this clone (referred to as 9-A11) is provided in SEQ ID NO: 226. Comparison of this sequence with those in the public databases revealed 99% identity to the known gene HOXB13.

Further studies led to the isolation of the clones 8-C6 and 8-H7. The determined cDNA sequences for these clones are provided in SEQ ID NO: 227 and 228, respectively. These sequences were found to show some homology to previously isolated ESTs.

PCR and hybridization-based methodologies were employed to obtain longer cDNA sequences for clone P20 (also referred to as P703P), yielding three additional cDNA fragments that progressively extend the 5' end of the gene. These fragments, referred to as P703PDE5, P703P6.26, and P703PX-23 (SEQ ID NO: 326, 328 and 330, with the predicted corresponding amino acid sequences being provided in SEQ ID NO: 327, 329 and 331, respectively) contain additional 5' sequence. P703PDE5 was recovered by screening of a cDNA library (#141-26) with a portion of P703P as a probe. P703P6.26 was recovered from a mixture of three prostate tumor cDNAs and P703PX_23 was recovered from cDNA library (#438-48). Together, the additional sequences include all of the putative mature serine protease along with part of the putative signal sequence. Further studies using a PCR-based subtraction library of a prostate tumor pool subtracted against a pool of normal tissues (referred to as JP: PCR subtraction) resulted in the isolation of thirteen additional clones, seven of which did not share any significant homology to known GenBank sequences. The determined cDNA sequences for these seven clones (P711P, P712P, novel 23, P774P, P775P, P710P and P768P) are provided in SEQ ID NO: 307-311, 313 and 315, respectively. The remaining six clones (SEQ ID NO: 316 and 321-325) were shown to share some homology to known genes. By microarray analysis, all thirteen clones showed three or more fold over-expression in prostate tissues, including prostate tumors, BPH and normal prostate as compared to normal non-prostate tissues. Clones P711P, P712P, novel 23 and P768P showed over-expression in most prostate tumors and BPH tissues tested (n=29), and in the majority of normal prostate tissues (n=4), but background to low expression levels in all normal tissues.

Clones P774P, P775P and P710P showed comparatively lower expression and expression in fewer prostate tumors and BPH samples, with negative to low expression in normal prostate.

The full-length cDNA for P711P was obtained by employing the partial sequence of SEQ ID NO: 307 to screen a prostate cDNA library. Specifically, a directionally cloned prostate cDNA library was prepared using standard techniques. One million colonies of this library were plated onto LB/Amp plates. Nylon membrane filters were used to lift these colonies, and the cDNAs which were picked up by these filters were denatured and cross-linked to the filters by UV light. The P711P cDNA fragment of SEQ ID NO: 307 was radio-labeled and used to hybridize with these filters. Positive clones were selected, and cDNAs were prepared and sequenced using an automatic Perkin Elmer/Applied Biosystems sequencer. The determined full-length sequence of P711P is provided in SEQ ID NO: 382, with the corresponding predicted amino acid sequence being provided in SEQ ID NO: 383.

Using PCR and hybridization-based methodologies, additional cDNA sequence information was derived for two clones described above, 11-C9 and 9-F3, herein after referred to as P707P and P714P, respectively (SEQ ID NO: 333 and 334). After comparison with the most recent GenBank, P707P was found to be a splice variant of the known gene HoxB13. In contrast, no significant homologies to P714P were found.

Clones 8-B3, P89, P98, P130 and P201 (as disclosed in U.S. Patent Application No. 09/020,956, filed February 9, 1998) were found to be contained within one contiguous sequence, referred to as P705P (SEQ ID NO: 335, with the predicted amino acid sequence provided in SEQ ID NO: 336), which was determined to be a splice variant of the known gene NKX 3.1.

EXAMPLE 4 SYNTHESIS OF POLYPEPTIDES

Polypeptides may be synthesized on a Perkin Elmer/Applied Biosystems 430A peptide synthesizer using Fmoc chemistry with HPTU (O-Benzotriazole-N,N,N',N'-tetramethyluronium hexafluorophosphate) activation. A Gly-Cys-Gly sequence may be attached to the amino terminus of the peptide to provide a method of conjugation, binding to an immobilized surface, or labeling of the peptide. Cleavage of the peptides from the solid support may be carried out using the following cleavage mixture: trifluoroacetic acid:ethanedithiol:thioanisole:water:phenol (40:1:2:2:3). After cleaving for 2 hours, the peptides may be precipitated in cold methyl-t-butyl-ether. The peptide pellets may then be dissolved in water containing 0.1% trifluoroacetic acid (TFA) and lyophilized prior to purification by C18 reverse phase HPLC. A gradient of 0%-60% acetonitrile (containing 0.1% TFA) in water (containing 0.1% TFA) may be used to elute the peptides. Following

lyophilization of the pure fractions, the peptides may be characterized using electrospray or other types of mass spectrometry and by amino acid analysis.

EXAMPLE 5

FURTHER ISOLATION AND CHARACTERIZATION OF PROSTATE TUMOR POLYPEPTIDES BY PCR-BASED SUBTRACTION

A cDNA library generated from prostate primary tumor mRNA as described above was subtracted with cDNA from normal prostate. The subtraction was performed using a PCR-based protocol (Clontech), which was modified to generate larger fragments. Within this protocol, tester and driver double stranded cDNA were separately digested with five restriction enzymes that recognize six-nucleotide restriction sites (MluI, MscI, PvuII, Sall and StuI). This digestion resulted in an average cDNA size of 600 bp, rather than the average size of 300 bp that results from digestion with RsaI according to the Clontech protocol. This modification did not affect the subtraction efficiency. Two tester populations were then created with different adapters, and the driver library remained without adapters.

The tester and driver libraries were then hybridized using excess driver cDNA. In the first hybridization step, driver was separately hybridized with each of the two tester cDNA populations. This resulted in populations of (a) unhybridized tester cDNAs, (b) tester cDNAs hybridized to other tester cDNAs, (c) tester cDNAs hybridized to driver cDNAs and (d) unhybridized driver cDNAs. The two separate hybridization reactions were then combined, and rehybridized in the presence of additional denatured driver cDNA. Following this second hybridization, in addition to populations (a) through (d), a fifth population (e) was generated in which tester cDNA with one adapter hybridized to tester cDNA with the second adapter. Accordingly, the second hybridization step resulted in enrichment of differentially expressed sequences which could be used as templates for PCR amplification with adaptor-specific primers.

The ends were then filled in, and PCR amplification was performed using adaptor-specific primers. Only population (e), which contained tester cDNA that did not hybridize to driver cDNA, was amplified exponentially. A second PCR amplification step was then performed, to reduce background and further enrich differentially expressed sequences.

This PCR-based subtraction technique normalizes differentially expressed cDNAs so that rare transcripts that are overexpressed in prostate tumor tissue may be recoverable. Such transcripts would be difficult to recover by traditional subtraction methods.

In addition to genes known to be overexpressed in prostate tumor, seventy-seven further clones were identified. Sequences of these partial cDNAs are provided in SEQ ID NO: 29 to 305. Most of these clones had no significant homology to database sequences. Exceptions were JPTPN23 (SEQ ID NO: 231; similarity to pig valosin-containing protein), JPTPN30 (SEQ ID NO: 234; similarity to rat mRNA for proteasome subunit), JPTPN45 (SEQ ID NO: 243; similarity to rat *norvegicus* cytosolic NADP-dependent isocitrate dehydrogenase), JPTPN46 (SEQ ID NO: 244; similarity to human subclone H8 4 d4 DNA sequence), JP1D6 (SEQ ID NO: 265; similarity to *G. gallus* dynein light chain-A), JP8D6 (SEQ ID NO: 288; similarity to human BAC clone RG016J04), JP8F5 (SEQ ID NO: 289; similarity to human subclone H8 3 b5 DNA sequence), and JP8E9 (SEQ ID NO: 299; similarity to human Alu sequence).

Additional studies using the PCR-based subtraction library consisting of a prostate tumor pool subtracted against a normal prostate pool (referred to as PT-PN PCR subtraction) yielded three additional clones. Comparison of the cDNA sequences of these clones with the most recent release of GenBank revealed no significant homologies to the two clones referred to as P715P and P767P (SEQ ID NO: 312 and 314). The remaining clone was found to show some homology to the known gene KIAA0056 (SEQ ID NO: 318). Using microarray analysis to measure mRNA expression levels in various tissues, all three clones were found to be over-expressed in prostate tumors and BPH tissues. Specifically, clone P715P was over-expressed in most prostate tumors and BPH tissues by a factor of three or greater, with elevated expression seen in the majority of normal prostate samples and in fetal tissue, but negative to low expression in all other normal tissues. Clone P767P was over-expressed in several prostate tumors and BPH tissues, with moderate expression levels in half of the normal prostate samples, and background to low expression in all other normal tissues tested.

Further analysis, by microarray as described above, of the PT-PN PCR subtraction library and of a DNA subtraction library containing cDNA from prostate tumor subtracted with a pool of normal tissue cDNAs, led to the isolation of 27 additional clones (SEQ ID NO: 340-365 and 381) which were determined to be over-expressed in prostate tumor. The clones of SEQ ID NO: 341, 342, 345, 347, 348, 349, 351, 355-359, 361, 362 and 364 were also found to be expressed in normal prostate. Expression of all 26 clones in a variety of normal tissues was found to be low or undetectable, with the exception of P544S (SEQ ID NO: 356) which was found to be expressed in small intestine. Of the 26 clones, 10 (SEQ ID NO: 340-349) were found to show some homology to previously identified sequences. No significant homologies were found to the clones of SEQ ID NO: 350-365.

EXAMPLE 6

PEPTIDE PRIMING OF MICE AND PROPAGATION OF CTL LINES

6.1. This Example illustrates the preparation of a CTL cell line specific for cells expressing the P502S gene.

Mice expressing the transgene for human HLA A2.1 (provided by Dr L. Sherman, The Scripps Research Institute, La Jolla, CA) were immunized with P2S#12 peptide (VLGWVAEL; SEQ ID NO: 306), which is derived from the P502S gene (also referred to herein as J1-17, SEQ ID NO: 8), as described by Theobald et al., *Proc. Natl. Acad. Sci. USA* 92:11993-11997, 1995 with the following modifications. Mice were immunized with 100µg of P2S#12 and 120µg of an I-A^b binding peptide derived from hepatitis B Virus protein emulsified in incomplete Freund's adjuvant. Three weeks later these mice were sacrificed and using a nylon mesh single cell suspensions prepared. Cells were then resuspended at 6×10^6 cells/ml in complete media (RPMI-1640; Gibco BRL, Gaithersburg, MD) containing 10% FCS, 2mM Glutamine (Gibco BRL), sodium pyruvate (Gibco BRL), non-essential amino acids (Gibco BRL), 2×10^{-5} M 2-mercaptoethanol, 50U/ml penicillin and streptomycin, and cultured in the presence of irradiated (3000 rads) P2S#12-pulsed (5mg/ml P2S#12 and 10mg/ml β 2-microglobulin) LPS blasts (A2 transgenic spleens cells cultured in the presence of 7µg/ml dextran sulfate and 25µg/ml LPS for 3 days). Six days later, cells (5×10^5 /ml) were restimulated with 2.5×10^6 /ml peptide pulsed irradiated (20,000 rads) EL4A2Kb cells (Sherman et al, *Science* 258:815-818, 1992) and 3×10^6 /ml A2 transgenic spleen feeder cells. Cells were cultured in the presence of 20U/ml IL-2. Cells continued to be restimulated on a weekly basis as described, in preparation for cloning the line.

P2S#12 line was cloned by limiting dilution analysis with peptide pulsed EL4 A2Kb tumor cells (1×10^4 cells/ well) as stimulators and A2 transgenic spleen cells as feeders (5×10^5 cells/ well) grown in the presence of 30U/ml IL-2. On day 14, cells were

restimulated as before. On day 21, clones that were growing were isolated and maintained in culture. Several of these clones demonstrated significantly higher reactivity (lysis) against human fibroblasts (HLA A2.1 expressing) transduced with P502S than against control fibroblasts. An example is presented in Figure 1.

This data indicates that P2S #12 represents a naturally processed epitope of the P502S protein that is expressed in the context of the human HLA A2.1 molecule.

6.2. This Example illustrates the preparation of murine CTL lines and CTL clones specific for cells expressing the P501S gene.

This series of experiments were performed similarly to that described above. Mice were immunized with the P1S#10 peptide (SEQ ID NO: 337), which is derived from the P501S gene (also referred to herein as L1-12, SEQ ID NO: 110). The P1S#10 peptide was derived by analysis of the predicted polypeptide sequence for P501S for potential HLA-A2 binding sequences as defined by published HLA-A2 binding motifs (Parker, KC, *et al*, *J. Immunol.*, 152:163, 1994). P1S#10 peptide was synthesized as described in Example 4, and empirically tested for HLA-A2 binding using a T cell based competition assay. Predicted A2 binding peptides were tested for their ability to compete HLA-A2 specific peptide presentation to an HLA-A2 restricted CTL clone (D150M58), which is specific for the HLA-A2 binding influenza matrix peptide fluM58. D150M58 CTL secretes TNF in response to self-presentation of peptide fluM58. In the competition assay, test peptides at 100-200 $\mu\text{g/ml}$ were added to cultures of D150M58 CTL in order to bind HLA-A2 on the CTL. After thirty minutes, CTL cultured with test peptides, or control peptides, were tested for their antigen dose response to the fluM58 peptide in a standard TNF bioassay. As shown in Figure 3, peptide P1S#10 competes HLA-A2 restricted presentation of fluM58, demonstrating that peptide P1S#10 binds HLA-A2.

Mice expressing the transgene for human HLA A2.1 were immunized as described by Theobald et al. (*Proc. Natl. Acad. Sci. USA* 92:11993-11997, 1995) with the following modifications. Mice were immunized with 62.5 μg of P1S #10 and 120 μg of an I-A^b binding peptide derived from Hepatitis B Virus protein emulsified in incomplete Freund's adjuvant. Three weeks later these mice were sacrificed and single cell suspensions prepared using a nylon mesh. Cells were then resuspended at 6×10^6 cells/ml in complete media (as described above) and cultured in the presence of irradiated (3000 rads) P1S#10-pulsed (2 $\mu\text{g/ml}$ P1S#10 and 10mg/ml β 2-microglobulin) LPS blasts (A2 transgenic spleens cells cultured in the presence of 7 $\mu\text{g/ml}$ dextran sulfate and 25 $\mu\text{g/ml}$ LPS for 3 days). Six days later cells (5×10^5 /ml) were restimulated with 2.5×10^6 /ml peptide-pulsed irradiated (20,000 rads) EL4A2Kb cells, as described above, and 3×10^6 /ml A2 transgenic spleen feeder cells. Cells were cultured in the presence of 20 U/ml IL-2. Cells were restimulated on a weekly

basis in preparation for cloning. After three rounds of *in vitro* stimulations, one line was generated that recognized P1S#10-pulsed Jurkat A2Kb targets and P501S-transduced Jurkat targets as shown in Figure 4.

A P1S#10-specific CTL line was cloned by limiting dilution analysis with peptide pulsed EL4 A2Kb tumor cells (1×10^4 cells/ well) as stimulators and A2 transgenic spleen cells as feeders (5×10^5 cells/ well) grown in the presence of 30U/ml IL-2. On day 14, cells were restimulated as before. On day 21, viable clones were isolated and maintained in culture. As shown in Figure 5, five of these clones demonstrated specific cytolytic reactivity against P501S-transduced Jurkat A2Kb targets. This data indicates that P1S#10 represents a naturally processed epitope of the P501S protein that is expressed in the context of the human HLA-A2.1 molecule.

EXAMPLE 7

ABILITY OF HUMAN T CELLS TO RECOGNIZE PROSTATE TUMOR POLYPEPTIDES

This Example illustrates the ability of T cells specific for a prostate tumor polypeptide to recognize human tumor.

Human CD8⁺ T cells were primed *in vitro* to the P2S-12 peptide (SEQ ID NO: 306) derived from P502S (also referred to as J1-17) using dendritic cells according to the protocol of Van Tsai et al. (*Critical Reviews in Immunology* 18:65-75, 1998). The resulting CD8⁺ T cell microcultures were tested for their ability to recognize the P2S-12 peptide presented by autologous fibroblasts or fibroblasts which were transduced to express the P502S gene in a γ -interferon ELISPOT assay (see Lalvani et al., *J. Exp. Med.* 186:859-865, 1997). Briefly, titrating numbers of T cells were assayed in duplicate on 10^4 fibroblasts in the presence of 3 μ g/ml human β_2 -microglobulin and 1 μ g/ml P2S-12 peptide or control E75 peptide. In addition, T cells were simultaneously assayed on autologous fibroblasts transduced with the P502S gene or as a control, fibroblasts transduced with HER-2/*neu*. Prior to the assay, the fibroblasts were treated with 10 ng/ml γ -interferon for 48 hours to upregulate class I MHC expression. One of the microcultures (#5) demonstrated strong recognition of both peptide pulsed fibroblasts as well as transduced fibroblasts in a γ -interferon ELISPOT assay. Figure 2A demonstrates that there was a strong increase in the number of γ -interferon spots with increasing numbers of T cells on fibroblasts pulsed with the P2S-12 peptide (solid bars) but not with the control E75 peptide (open bars). This shows the ability of these T cells to specifically recognize the P2S-12 peptide. As shown in Figure 2B, this microculture also demonstrated an increase in the number of γ -interferon spots with increasing numbers of T

cells on fibroblasts transduced to express the P502S gene but not the HER-2/*neu* gene. These results provide additional confirmatory evidence that the P2S-12 peptide is a naturally processed epitope of the P502S protein. Furthermore, this also demonstrates that there exists in the human T cell repertoire, high affinity T cells which are capable of recognizing this epitope. These T cells should also be capable of recognizing human tumors which express the P502S gene.

EXAMPLE 8

PRIMING OF CTL *IN VIVO* USING NAKED DNA IMMUNIZATION WITH A PROSTATE ANTIGEN

The prostate tumor antigen L1-12, as described above, is also referred to as P501S. HLA A2Kb Tg mice (provided by Dr L. Sherman, The Scripps Research Institute, La Jolla, CA) were immunized with 100 µg VR10132-P501S either intramuscularly or intradermally. The mice were immunized three times, with a two week interval between immunizations. Two weeks after the last immunization, immune spleen cells were cultured with Jurkat A2Kb-P501S transduced stimulator cells. CTL lines were stimulated weekly. After two weeks of *in vitro* stimulation, CTL activity was assessed against P501S transduced targets. Two out of 8 mice developed strong anti-P501S CTL responses. These results demonstrate that P501S contains at least one naturally processed A2-restricted CTL epitope.

EXAMPLE 9

GENERATION OF HUMAN CTL *IN VITRO* USING WHOLE GENE PRIMING AND STIMULATION TECHNIQUES WITH PROSTATE TUMOR ANTIGEN

Using *in vitro* whole-gene priming with P501S-retrovirally transduced autologous fibroblasts (see, for example, Yee et al, *The Journal of Immunology*, 157(9):4079-86, 1996), human CTL lines were derived that specifically recognize autologous fibroblasts transduced with P501S (also known as L1-12), as determined by interferon-γ ELISPOT analysis as described above. Using a panel of HLA-mismatched fibroblast lines transduced with P501S, these CTL lines were shown to be restricted HLA-A2 class I allele. Specifically, dendritic cells (DC) were differentiated from monocyte cultures derived from PBMC of normal human donors by growing for five days in RPMI medium containing 10% human serum, 50 ng/ml human GM-CSF and 30 ng/ml human IL-4. Following culture, DC were infected overnight with recombinant P501S vaccinia virus at a multiplicity of infection (M.O.I) of five, and matured overnight by the addition of 3 µg/ml CD40 ligand. Virus was inactivated by UV irradiation. CD8+ T cells were isolated using a magnetic bead system, and

priming cultures were initiated using standard culture techniques. Cultures were restimulated every 7-10 days using autologous primary fibroblasts retrovirally transduced with P501S. Following four stimulation cycles, CD8+ T cell lines were identified that specifically produced interferon- γ when stimulated with P501S-transduced autologous fibroblasts. The P501S-specific activity could be sustained by the continued stimulation of the cultures with P501S-transduced fibroblasts in the presence of IL-15. A panel of HLA-mismatched fibroblast lines transduced with P501S were generated to define the restriction allele of the response. By measuring interferon- γ in an ELISPOT assay, the P501S specific response was shown to be restricted by HLA-A2. These results demonstrate that a CD8+ CTL response to P501S can be elicited.

EXAMPLE 10

IDENTIFICATION OF A NATURALLY PROCESSED CTL EPITOPE CONTAINED WITHIN A PROSTATE TUMOR ANTIGEN

The 9-mer peptide p5 (SEQ ID NO: 338) was derived from the P703P antigen (also referred to as P20). The p5 peptide is immunogenic in human HLA-A2 donors and is a naturally processed epitope. Antigen specific CD8+ T cells can be primed following repeated *in vitro* stimulations with monocytes pulsed with p5 peptide. These CTL specifically recognize p5-pulsed target cells in both ELISPOT (as described above) and chromium release assays. Additionally, immunization of HLA-A2 transgenic mice with p5 leads to the generation of CTL lines which recognize a variety of P703P transduced target cells expressing either HLA-A2Kb or HLA-A2. Specifically, HLA-A2 transgenic mice were immunized subcutaneously in the footpad with 100 μ g of p5 peptide together with 140 μ g of hepatitis B virus core peptide (a Th peptide) in Freund's incomplete adjuvant. Three weeks post immunization, spleen cells from immunized mice were stimulated *in vitro* with peptide-pulsed LPS blasts. CTL activity was assessed by chromium release assay five days after primary *in vitro* stimulation. Retrovirally transduced cells expressing the control antigen P703P and HLA-A2Kb were used as targets. CTL lines that specifically recognized both p5-pulsed targets as well as P703P-expressing targets were identified.

Human *in vitro* priming experiments demonstrated that the p5 peptide is immunogenic in humans. Dendritic cells (DC) were differentiated from monocyte cultures derived from PBMC of normal human donors by culturing for five days in RPMI medium containing 10% human serum, 50 ng/ml human GM-CSF and 30 ng/ml human IL-4. Following culture, the DC were pulsed with p5 peptide and cultured with GM-CSF and IL-4 together with CD8+ T cell enriched PBMC. CTL lines were restimulated on a weekly basis

with p5-pulsed monocytes. Five to six weeks after initiation of the CTL cultures, CTL recognition of p5-pulsed target cells was demonstrated.

EXAMPLE 11

EXPRESSION OF A BREAST TUMOR-DERIVED ANTIGEN IN PROSTATE

Isolation of the antigen B305D from breast tumor by differential display is described in US Patent Application No. 08/700,014, filed August 20, 1996. Several different splice forms of this antigen were isolated. The determined cDNA sequences for these splice forms are provided in SEQ ID NO: 366-375, with the predicted amino acid sequences corresponding to the sequences of SEQ ID NO: 292, 298 and 301-303 being provided in SEQ ID NO: 299-306, respectively.

The expression levels of B305D in a variety of tumor and normal tissues were examined by real time PCR and by Northern analysis. The results indicated that B305D is highly expressed in breast tumor, prostate tumor, normal prostate tumor and normal testes, with expression being low or undetectable in all other tissues examined (colon tumor, lung tumor, ovary tumor, and normal bone marrow, colon, kidney, liver, lung, ovary, skin, small intestine, stomach).

EXAMPLE 12

ELICITATION OF PROSTATE TUMOR ANTIGEN-SPECIFIC CTL RESPONSES IN HUMAN BLOOD

This Example illustrates the ability of a prostate tumor antigen to elicit a CTL response in blood of normal humans.

Autologous dendritic cells (DC) were differentiated from monocyte cultures derived from PBMC of normal donors by growth for five days in RPMI medium containing 10% human serum, 50 ng/ml GMCSF and 30 ng/ml IL-4. Following culture, DC were infected overnight with recombinant P501S-expressing vaccinia virus at an M.O.I. of 5 and matured for 8 hours by the addition of 2 micrograms/ml CD40 ligand. Virus was inactivated by UV irradiation, CD8⁺ cells were isolated by positive selection using magnetic beads, and priming cultures were initiated in 24-well plates. Following five stimulation cycles, CD8⁺ lines were identified that specifically produced interferon-gamma when stimulated with autologous P501S-transduced fibroblasts. The P501S-specific activity of cell line 3A-1 could be maintained following additional stimulation cycles on autologous B-LCL transduced with P501S. Line 3A-1 was shown to specifically recognize autologous B-LCL transduced to

express P501S, but not EGFP-transduced autologous B-LCL, as measured by cytotoxicity assays (^{51}Cr release) and interferon-gamma production (Interferon-gamma Elispot; *see above* and Lalvani et al., *J. Exp. Med.* 186:859-865, 1997). The results of these assays are presented in Figures 6A and 6B.

EXAMPLE 13

IDENTIFICATION OF PROSTATE TUMOR ANTIGENS BY MICROARRAY ANALYSIS

This Example describes the isolation of certain prostate tumor polypeptides from a prostate tumor cDNA library.

A human prostate tumor cDNA expression library as described above was screened using microarray analysis to identify clones that display at least a three fold over-expression in prostate tumor and/or normal prostate tissue, as compared to non-prostate normal tissues (not including testis). 372 clones were identified, and 319 were successfully sequenced. Table I presents a summary of these clones, which are shown in SEQ ID NOs:385-400. Of these sequences SEQ ID NOs:386, 389, 390 and 392 correspond to novel genes, and SEQ ID NOs: 393 and 396 correspond to previously identified sequences. The others (SEQ ID NOs:385, 387, 388, 391, 394, 395 and 397-400) correspond to known sequences, as shown in Table I.

Table I
Summary of Prostate Tumor Antigens

Known Genes	Previously identified Genes	Novel Genes
T-cell gamma chain	P504S	23379 (SEQ ID NO:389)
Kallikrein	P1000C	23399 (SEQ ID NO:392)
Vector	P501S	23320 (SEQ ID NO:386)
CGI-82 protein mRNA (23319; SEQ ID NO:385)	P503S	23381 (SEQ ID NO:390)
PSA	P510S	
Ald. 6 Dehyd.	P784P	
L-idoitol-2 dehydrogenase (23376; SEQ ID NO:388)	P502S	
Ets transcription factor PDEF (22672; SEQ ID NO:398)	P706P	
hTGR (22678; SEQ ID NO:399)	19142.2, bangur.seq (22621; SEQ ID NO:396)	
KIAA0295(22685; SEQ ID NO:400)	5566.1 Wang(23404; SEQ ID NO:393)	
Prostatic Acid Phosphatase(22655; SEQ ID NO:397)	P712P	

SUBSTITUTE SHEET (RULE 26)

transglutaminase (22611; SEQ ID NO:395)	P778P	
HDLBP (23508; SEQ ID NO:394)		
CGI-69 Protein(23367; SEQ ID NO:387)		
KIAA0122(23383; SEQ ID NO:391)		
TEEG		

CGI-82 showed 4.06 fold over-expression in prostate tissues as compared to other normal tissues tested. It was over-expressed in 43% of prostate tumors, 25% normal prostate, not detected in other normal tissues tested. L-iditol-2 dehydrogenase showed 4.94 fold over-expression in prostate tissues as compared to other normal tissues tested. It was over-expressed in 90% of prostate tumors, 100% of normal prostate, and not detected in other normal tissues tested. Ets transcription factor PDEF showed 5.55 fold over-expression in prostate tissues as compared to other normal tissues tested. It was over-expressed in 47% prostate tumors, 25% normal prostate and not detected in other normal tissues tested. hTGR1 showed 9.11 fold over-expression in prostate tissues as compared to other normal tissues tested. It was over-expressed in 63% of prostate tumors and is not detected in normal tissues tested including normal prostate. KIAA0295 showed 5.59 fold over-expression in prostate tissues as compared to other normal tissues tested. It was over-expressed in 47% of prostate tumors, low to undetectable in normal tissues tested including normal prostate tissues. Prostatic acid phosphatase showed 9.14 fold over-expression in prostate tissues as compared to other normal tissues tested. It was over-expressed in 67% of prostate tumors, 50% of normal prostate, and not detected in other normal tissues tested. Transglutaminase showed 14.84 fold over-expression in prostate tissues as compared to other normal tissues tested. It was over-expressed in 30% of prostate tumors, 50% of normal prostate, and is not detected in other normal tissues tested. High density lipoprotein binding protein (HDLBP) showed 28.06 fold over-expression in prostate tissues as compared to other normal tissues tested. It was over-expressed in 97% of prostate tumors, 75% of normal prostate, and is undetectable in all other normal tissues tested. CGI-69 showed 3.56 fold over-expression in prostate tissues as compared to other normal tissues tested. It is a low abundant gene, detected in more than 90% of prostate tumors, and in 75% normal prostate tissues. The expression of this gene in normal tissues was very low. KIAA0122 showed 4.24 fold over-expression in prostate

tissues as compared to other normal tissues tested. It was over-expressed in 57% of prostate tumors, it was undetectable in all normal tissues tested including normal prostate tissues. 19142.2 bangur showed 23.25 fold over-expression in prostate tissues as compared to other normal tissues tested. It was over-expressed in 97% of prostate tumors and 100% of normal prostate. It was undetectable in other normal tissues tested. 5566.1 Wang showed 3.31 fold over-expression in prostate tissues as compared to other normal tissues tested. It was over-expressed in 97% of prostate tumors, 75% normal prostate and was also over-expressed in normal bone marrow, pancreas, and activated PBMC. Novel clone 23379 showed 4.86 fold over-expression in prostate tissues as compared to other normal tissues tested. It was detectable in 97% of prostate tumors and 75% normal prostate and is undetectable in all other normal tissues tested. Novel clone 23399 showed 4.09 fold over-expression in prostate tissues as compared to other normal tissues tested. It was over-expressed in 27% of prostate tumors and was undetectable in all normal tissues tested including normal prostate tissues. Novel clone 23320 showed 3.15 fold over-expression in prostate tissues as compared to other normal tissues tested. It was detectable in all prostate tumors and 50% of normal prostate tissues. It was also expressed in normal colon and trachea. Other normal tissues do not express this gene at high level.

EXAMPLE 14

IDENTIFICATION OF PROSTATE TUMOR ANTIGENS BY ELECTRONIC SUBTRACTION

This Example describes the use of an electronic subtraction technique to identify prostate tumor antigens.

Potential prostate-specific genes present in the GenBank human EST database were identified by electronic subtraction (similar to that described by Vasmatizis et al., *Proc. Natl. Acad. Sci. USA* 95:300-304, 1998). The sequences of EST clones (43,482) derived from various prostate libraries were obtained from the GenBank public human EST database. Each prostate EST sequence was used as a query sequence in a BLASTN (National Center for Biotechnology Information) search against the human EST database. All matches considered identical (length of matching sequence >100 base pairs, density of identical matches over this region > 70%) were grouped (aligned) together in a cluster. Clusters containing more than 200 ESTs were discarded since they probably represented repetitive elements or highly expressed genes such as those for ribosomal proteins. If two or more clusters shared common ESTs, those clusters were grouped together into a "supercluster," resulting in 4,345 prostate superclusters.

Records for the 479 human cDNA libraries represented in the GenBank release were downloaded to create a database of these cDNA library records. These 479 cDNA libraries were grouped into three groups, Plus (normal prostate and prostate tumor libraries, and breast cell lines, in which expression was desired), Minus (libraries from other normal adult tissues, in which expression was not desirable), and Other (fetal tissue, infant tissue, tissues found only in women, non-prostate tumors and cell lines other than prostate cell lines, in which expression was considered to be irrelevant). A summary of these library groups is presented in Table II.

Table II
Prostate cDNA Libraries and ESTs

Library	# of Libraries	# of ESTs
Plus	25	43,482
Normal	11	18,875
Tumor	11	21,769
Cell lines	3	2,838
Minus	166	
Other	287	

Each supercluster was analyzed in terms of the ESTs within the supercluster. The tissue source of each EST clone was noted and used to classify the superclusters into four groups: Type 1- EST clones found in the Plus group libraries only; no expression detected in Minus or Other group libraries; Type 2- EST clones found in the Plus and Other group libraries only; no expression detected in the Minus group; Type 3- EST clones found in the Plus, Minus and Other group libraries, but the expression in the Plus group is higher than in either the Minus or Other groups; and Type 4- EST clones found in Plus, Minus and Other group libraries, but the expression in the Plus group is higher than the expression in the Minus group. This analysis identified 4,345 breast clusters (*see* Table III). From these clusters, 3,172 EST clones were ordered from Research Genetics, Inc., and were received as frozen glycerol stocks in 96-well plates.

Table III
Prostate Cluster Summary

Type	# of Superclusters	# of ESTs Ordered
1	688	677
2	2899	2484
3	85	11
4	673	0
Total	4345	3172

The inserts were PCR-amplified using amino-linked PCR primers for Synteni microarray analysis. When more than one PCR product was obtained for a particular clone, that PCR product was not used for expression analysis. In total, 2,528 clones from the electronic subtraction method were analyzed by microarray analysis to identify electronic subtraction breast clones that had high tumor vs. normal tissue mRNA. Such screens were performed using a Synteni (Palo Alto, CA) microarray, according to the manufacturer's instructions (and essentially as described by Schena et al., *Proc. Natl. Acad. Sci. USA* 93:10614-10619, 1996 and Heller et al., *Proc. Natl. Acad. Sci. USA* 94:2150-2155, 1997). Within these analyses, the clones were arrayed on the chip, which was then probed with fluorescent probes generated from normal and tumor prostate cDNA, as well as various other normal tissues. The slides were scanned and the fluorescence intensity was measured.

Clones with an expression ratio greater than 3 (*i.e.*, the level in prostate tumor cDNA was at least three times the level in normal prostate cDNA) were identified as prostate tumor-specific sequences (Table IV). The sequences of these clones are provided in SEQ ID NOs:401-453, with certain novel sequences shown in SEQ ID NOs:407, 413, 416-419, 422, 426, 427 and 450.

Table IV
Prostate-tumor Specific Clones

SEQ ID NO.	Sequence Designation	Comments
401	22545	previously identified P1000C
402	22547	previously identified P704P

403	22548	known
404	22550	known
405	22551	PSA
406	22552	prostate secretory protein 94
407	22553	novel
408	22558	previously identified P509S
409	22562	glandular kallikrein
410	22565	previously identified P1000C
411	22567	PAP
412	22568	B1006C (breast tumor antigen)
413	22570	novel
414	22571	PSA
415	22572	previously identified P706P
416	22573	novel
417	22574	novel
418	22575	novel
419	22580	novel
420	22581	PAP
421	22582	prostatic secretory protein 94
422	22583	novel
423	22584	prostatic secretory protein 94
424	22585	prostatic secretory protein 94
425	22586	known
426	22587	novel
427	22588	novel
428	22589	PAP
429	22590	known
430	22591	PSA
431	22592	known
432	22593	Previously identified P777P
433	22594	T cell receptor gamma chain
434	22595	Previously identified P705P
435	22596	Previously identified P707P
436	22847	PAP
437	22848	known
438	22849	prostatic secretory protein 57

SUBSTITUTE SHEET (RULE 26)

439	22851	PAP
440	22852	PAP
441	22853	PAP
442	22854	previously identified P509S
443	22855	previously identified P705P
444	22856	previously identified P774P
445	22857	PSA
446	23601	previously identified P777P
447	23602	PSA
448	23605	PSA
449	23606	PSA
450	23612	novel
451	23614	PSA
452	23618	previously identified P1000C
453	23622	previously identified P705P

EXAMPLE 15

FURTHER IDENTIFICATION OF PROSTATE TUMOR ANTIGENS BY MICROARRAY ANALYSIS

This Example describes the isolation of additional prostate tumor polypeptides from a prostate tumor cDNA library.

A human prostate tumor cDNA expression library as described above was screened using microarray analysis to identify clones that display at least a three fold over-expression in prostate tumor and/or normal prostate tissue, as compared to non-prostate normal tissues (not including testis). 142 clones were identified and sequenced. Certain of these clones are shown in SEQ ID NOs:454-467. Of these sequences SEQ ID NOs:459-461 correspond to novel genes. The others (SEQ ID NOs:454-458 and 461-467) correspond to known sequences.

EXAMPLE 16

FURTHER CHARACTERIZATION OF PROSTATE TUMOR ANTIGEN P710P

This Example describes the full length cloning of P710P.

SUBSTITUTE SHEET (RULE 26)

The prostate cDNA library described above was screened with the P710P fragment described above. One million colonies were plated on LB/Ampicillin plates. Nylon membrane filters were used to lift these colonies, and the cDNAs picked up by these filters were then denatured and cross-linked to the filters by UV light. The P710P fragment was radiolabeled and used to hybridize with the filters. Positive cDNA clones were selected and their cDNAs recovered and sequenced by an automatic ABI Sequencer. Four sequences were obtained, and are presented in SEQ ID NOs:468-471.

From the foregoing, it will be appreciated that, although specific embodiments of the invention have been described herein for the purposes of illustration, various modifications may be made without deviating from the spirit and scope of the invention. Accordingly, the present invention is not limited except as by the appended claims.

CLAIMS

1. An isolated polypeptide comprising at least an immunogenic portion of a prostate tumor protein, or a variant thereof, wherein the tumor protein comprises an amino acid sequence that is encoded by a polynucleotide sequence selected from the group consisting of:

(a) sequences recited in any one of SEQ ID NOs:2, 3, 8-29, 41-45, 47-52, 54-65, 70, 73-74, 79, 81, 87, 90, 92, 93, 97, 103, 104, 107, 109-111, 115-160, 171, 173-175, 177, 181, 188, 191, 193, 194, 198, 203, 204, 207, 209, 220, 222-225, 227-305, 307-315, 326, 328, 330, 332, 334, 350-365, 381, 382, 384, 386, 389, 390, 392, 393, 396, 401, 402, 407, 408, 410, 413, 415-419, 422, 426, 427, 432, 434, 435, 442-444, 446, 450, 452, 453, 459-461, 468-471 or 472;

(b) sequences that hybridize to any of the foregoing sequences under moderately stringent conditions; and

(c) complements of any of the sequence of (a) or (b).

2. An isolated polypeptide according to claim 1, wherein the polypeptide comprises an amino acid sequence that is encoded by a polynucleotide sequence recited in any one of SEQ ID NOs:2, 3, 8-29, 41-45, 47-52, 54-65, 70, 73-74, 79, 81, 87, 90, 92, 93, 97, 103, 104, 107, 109-111, 115-160, 171, 173-175, 177, 181, 188, 191, 193, 194, 198, 203, 204, 207, 209, 220, 222-225, 227-305, 307-315, 326, 328, 330, 332, 334, 350-365, 381, 382, 384, 386, 389, 390, 392, 393, 396, 401, 402, 407, 408, 410, 413, 415-419, 422, 426, 427, 432, 434, 435, 442-444, 446, 450, 452, 453, 459-461, 468-471 or 472, or a complement of any of the foregoing polynucleotide sequences.

3. An isolated polypeptide comprising a sequence recited in any one of SEQ ID NO: 108, 112, 113, 114, 172, 176, 178, 327, 329, 331, 339 and 383.

4. An isolated polynucleotide encoding at least 15 amino acid residues of a prostate tumor protein, or a variant thereof that differs in one or more substitutions, deletions, additions and/or insertions such that the ability of the variant to react with antigen-specific antisera is not substantially diminished, wherein the tumor protein comprises an amino acid sequence that is encoded by a polynucleotide comprising a sequence recited in any one of SEQ ID NOs:2, 3, 8-29, 41-45, 47-52, 54-65, 70, 73-74, 79, 81, 87, 90, 92, 93, 97, 103, 104, 107, 109-111, 115-160, 171, 173-175, 177, 181, 188, 191, 193, 194, 198, 203, 204, 207, 209, 220, 222-225, 227-305, 307-315, 326, 328, 330, 332, 334, 350-365, 381, 382, 384, 386, 389, 390, 392, 393, 396, 401, 402, 407, 408, 410, 413, 415-419, 422, 426, 427, 432, 434,

435, 442-444, 446, 450, 452, 453, 459-461, 468-471 or 472, or a complement of any of the foregoing sequences.

5. An isolated polynucleotide encoding a prostate tumor protein, or a variant thereof, wherein the tumor protein comprises an amino acid sequence that is encoded by a polynucleotide comprising a sequence recited in any one of SEQ ID NOs:2, 3, 8-29, 41-45, 47-52, 54-65, 70, 73-74, 79, 81, 87, 90, 92, 93, 97, 103, 104, 107, 109-111, 115-160, 171, 173-175, 177, 181, 188, 191, 193, 194, 198, 203, 204, 207, 209, 220, 222-225, 227-305, 307-315, 326, 328, 330, 332, 334, 350-365, 381, 382, 384, 386, 389, 390, 392, 393, 396, 401, 402, 407, 408, 410, 413, 415-419, 422, 426, 427, 432, 434, 435, 442-444, 446, 450, 452, 453, 459-461, 468-471 or 472, or a complement of any of the foregoing sequences.

6. An isolated polynucleotide comprising a sequence recited in any one of SEQ ID NOs:2, 3, 8-29, 41-45, 47-52, 54-65, 70, 73-74, 79, 81, 87, 90, 92, 93, 97, 103, 104, 107, 109-111, 115-160, 171, 173-175, 177, 181, 188, 191, 193, 194, 198, 203, 204, 207, 209, 220, 222-225, 227-305, 307-315, 326, 328, 330, 332, 334, 350-365, 381, 382, 384, 386, 389, 390, 392, 393, 396, 401, 402, 407, 408, 410, 413, 415-419, 422, 426, 427, 432, 434, 435, 442-444, 446, 450, 452, 453, 459-461, 468-471 or 472.

7. An isolated polynucleotide comprising a sequence that hybridizes, under moderately stringent conditions, to a sequence recited in any one of SEQ ID NOs:2, 3, 8-29, 41-45, 47-52, 54-65, 70, 73-74, 79, 81, 87, 90, 92, 93, 97, 103, 104, 107, 109-111, 115-160, 171, 173-175, 177, 181, 188, 191, 193, 194, 198, 203, 204, 207, 209, 220, 222-225, 227-305, 307-315, 326, 328, 330, 332, 334, 350-365, 381, 382, 384, 386, 389, 390, 392, 393, 396, 401, 402, 407, 408, 410, 413, 415-419, 422, 426, 427, 432, 434, 435, 442-444, 446, 450, 452, 453, 459-461, 468-471 or 472.

8. An isolated polynucleotide complementary to a polynucleotide according to any one of claims 4-7.

9. An expression vector comprising a polynucleotide according to any one of claims 4-7.

10. A host cell transformed or transfected with an expression vector according to claim 9.

11. An expression vector comprising a polynucleotide according claim 8.

12. A host cell transformed or transfected with an expression vector according to claim 11.

13. A pharmaceutical composition comprising a polypeptide according to claim 1, in combination with a physiologically acceptable carrier.

14. A vaccine comprising a polypeptide according to claim 1, in combination with a non-specific immune response enhancer.

15. A vaccine according to claim 14, wherein the non-specific immune response enhancer is an adjuvant.

16. A vaccine according to claim 14, wherein the non-specific immune response enhancer induces a predominantly Type I response.

17. A pharmaceutical composition comprising a polynucleotide according to claim 4, in combination with a physiologically acceptable carrier.

18. A vaccine comprising a polynucleotide according to claim 4, in combination with a non-specific immune response enhancer.

19. A vaccine according to claim 18, wherein the non-specific immune response enhancer is an adjuvant.

20. A vaccine according to claim 18, wherein the non-specific immune response enhancer induces a predominantly Type I response.

21. An isolated antibody, or antigen-binding fragment thereof, that specifically binds to a prostate tumor protein that comprises an amino acid sequence that is encoded by a polynucleotide sequence recited in any one of SEQ ID NOs:2, 3, 8-29, 41-45, 47-52, 54-65, 70, 73-74, 79, 81, 87, 90, 92, 93, 97, 103, 104, 107, 109-111, 115-160, 171, 173-175, 177, 181, 188, 191, 193, 194, 198, 203, 204, 207, 209, 220, 222-225, 227-305, 307-315, 326, 328, 330, 332, 334, 350-365, 381, 382, 384, 386, 389, 390, 392, 393, 396, 401, 402, 407, 408, 410, 413, 415-419, 422, 426, 427, 432, 434, 435, 442-444, 446, 450, 452, 453, 459-461, 468-471 or 472 or a complement of any of the foregoing polynucleotide sequences.

22. A pharmaceutical composition comprising an antibody or fragment thereof according to claim 18, in combination with a physiologically acceptable carrier.

23. A pharmaceutical composition comprising an antigen-presenting cell that expresses a polypeptide according to claim 1, in combination with a pharmaceutically acceptable carrier or excipient.

24. A pharmaceutical composition according to claim 23, wherein the antigen presenting cell is a dendritic cell or a macrophage.

25. A vaccine comprising an antigen-presenting cell that expresses a polypeptide according to claim 1, in combination with a non-specific immune response enhancer.

26. A vaccine according to claim 25, wherein the non-specific immune response enhancer is an adjuvant.

27. A vaccine according to claim 25, wherein the non-specific immune response enhancer induces a predominantly Type I response.

28. A vaccine according to claim 25, wherein the antigen-presenting cell is a dendritic cell.

29. A method for inhibiting the development of a cancer in a patient, comprising administering to a patient an effective amount of a polypeptide according to claim 1, and thereby inhibiting the development of a cancer in the patient.

30. A method for inhibiting the development of a cancer in a patient, comprising administering to a patient an effective amount of a polynucleotide according to claim 4, and thereby inhibiting the development of a cancer in the patient.

31. A method for inhibiting the development of a cancer in a patient, comprising administering to a patient an effective amount of an antibody or antigen-binding fragment thereof according to claim 21, and thereby inhibiting the development of a cancer in the patient.

32. A method for inhibiting the development of a cancer in a patient, comprising administering to a patient an effective amount of an antigen-presenting cell that expresses a polypeptide according to claim 1, and thereby inhibiting the development of a cancer in the patient.
33. A method according to claim 32, wherein the antigen-presenting cell is a dendritic cell.
34. A method according to any one of claims 29-32, wherein the cancer is prostate cancer.
35. A fusion protein comprising at least one polypeptide according to claim 1.
36. A fusion protein according to claim 35, wherein the fusion protein comprises an expression enhancer that increases expression of the fusion protein in a host cell transfected with a polynucleotide encoding the fusion protein.
37. A fusion protein according to claim 35, wherein the fusion protein comprises a T helper epitope that is not present within the polypeptide of claim 1.
38. A fusion protein according to claim 35, wherein the fusion protein comprises an affinity tag.
39. An isolated polynucleotide encoding a fusion protein according to claim 35.
40. A pharmaceutical composition comprising a fusion protein according to claim 32, in combination with a physiologically acceptable carrier.
41. A vaccine comprising a fusion protein according to claim 35, in combination with a non-specific immune response enhancer.
42. A vaccine according to claim 41, wherein the non-specific immune response enhancer is an adjuvant.

43. A vaccine according to claim 41, wherein the non-specific immune response enhancer induces a predominantly Type I response.
44. A pharmaceutical composition comprising a polynucleotide according to claim 40, in combination with a physiologically acceptable carrier.
45. A vaccine comprising a polynucleotide according to claim 40, in combination with a non-specific immune response enhancer.
46. A vaccine according to claim 45, wherein the non-specific immune response enhancer is an adjuvant.
47. A vaccine according to claim 45, wherein the non-specific immune response enhancer induces a predominantly Type I response.
48. A method for inhibiting the development of a cancer in a patient, comprising administering to a patient an effective amount of a pharmaceutical composition according to claim 40 or claim 44.
49. A method for inhibiting the development of a cancer in a patient, comprising administering to a patient an effective amount of a vaccine according to claim 41 or claim 45.
50. A method for removing tumor cells from a biological sample, comprising contacting a biological sample with T cells that specifically react with a prostate tumor protein, wherein the tumor protein comprises an amino acid sequence that is encoded by a polynucleotide sequence selected from the group consisting of:
- (i) polynucleotides recited in any one of SEQ ID NOs:1-111, 115-171, 173-175, 177, 179-305, 307-315, 326, 328, 330, 332-335, 340-375, 381, 382 or 384-472; and
 - (ii) complements of the foregoing polynucleotides;
- wherein the step of contacting is performed under conditions and for a time sufficient to permit the removal of cells expressing the prostate tumor protein from the sample.
51. A method according to claim 50, wherein the biological sample is blood or a fraction thereof.

52. A method for inhibiting the development of a cancer in a patient, comprising administering to a patient a biological sample treated according to the method of claim 50.

53. A method for stimulating and/or expanding T cells specific for a prostate tumor protein, comprising contacting T cells with one or more of:

- (i) a polypeptide according to claim 1;
 - (ii) a polypeptide encoded by a polynucleotide comprising a sequence provided in any one of SEQ ID NOs:1-111, 115-171, 173-175, 177, 179-305, 307-315, 326, 328, 330, 332-335, 340-375, 381, 382 or 384-472;
 - (iii) a polynucleotide encoding a polypeptide of (i) or (ii); and/or
 - (iv) an antigen presenting cell that expresses a polypeptide of (i) or (ii);
- under conditions and for a time sufficient to permit the stimulation and/or expansion of T cells.

54. An isolated T cell population, comprising T cells prepared according to the method of claim 53.

55. A method for inhibiting the development of a cancer in a patient, comprising administering to a patient an effective amount of a T cell population according to claim 54.

56. A method for inhibiting the development of a cancer in a patient, comprising the steps of:

(a) incubating CD4⁺ and/or CD8⁺ T cells isolated from a patient with at least one component selected from the group consisting of:

- (i) a polypeptide according to claim 1;
- (ii) a polypeptide encoded by a polynucleotide comprising a sequence of any one of SEQ ID NOs:1-111, 115-171, 173-175, 177, 179-305, 307-315, 326, 328, 330, 332-335, 340-375, 381, 382 or 384-472;
- (iii) a polynucleotide encoding a polypeptide of (i) or (ii); or
- (iv) an antigen-presenting cell that expresses a polypeptide of (i) or (ii);

such that T cells proliferate; and

(b) administering to the patient an effective amount of the proliferated T cells, and thereby inhibiting the development of a cancer in the patient.

57. A method for inhibiting the development of a cancer in a patient, comprising the steps of:

(a) incubating CD4⁺ and/or CD8⁺ T cells isolated from a patient with at least one component selected from the group consisting of:

- (i) a polypeptide according to claim 1;
- (ii) a polypeptide encoded by a polynucleotide comprising a sequence of any one of SEQ ID NOs: 1-111, 115-171, 173-175, 177, 179-305, 307-315, 326, 328, 330, 332-335, 340-375, 381, 382 or 384-472;
- (iii) a polynucleotide encoding a polypeptide of (i) or (ii); or
- (iv) an antigen-presenting cell that expresses a polypeptide of (i) or (ii);

such that T cells proliferate;

- (b) cloning at least one proliferated cell; and
- (c) administering to the patient an effective amount of the cloned T cells, and thereby inhibiting the development of a cancer in the patient.

58. A method for determining the presence or absence of a cancer in a patient, comprising the steps of:

(a) contacting a biological sample obtained from a patient with a binding agent that binds to a prostate tumor protein, wherein the tumor protein comprises an amino acid sequence that is encoded by a polynucleotide sequence selected from the group consisting of:

(i) polynucleotides recited in any one of SEQ ID NOs: 1-111, 115-171, 173-175, 177, 179-305, 307-315, 326, 328, 330, 332-335, 340-375, 381, 382 or 384-472; and

(ii) complements of the foregoing polynucleotides;

(b) detecting in the sample an amount of polypeptide that binds to the binding agent; and

(c) comparing the amount of polypeptide to a predetermined cut-off value, and therefrom determining the presence or absence of a cancer in the patient.

59. A method according to claim 58, wherein the binding agent is an antibody.

60. A method according to claim 59, wherein the antibody is a monoclonal antibody.

61. A method according to claim 58, wherein the cancer is prostate cancer.
62. A method for monitoring the progression of a cancer in a patient, comprising the steps of:
- (a) contacting a biological sample obtained from a patient at a first point in time with a binding agent that binds to a prostate tumor protein, wherein the tumor protein comprises an amino acid sequence that is encoded by a polynucleotide sequence recited in any one of SEQ ID NOs:1-111, 115-171, 173-175, 177, 179-305, 307-315, 326, 328, 330, 332-335, 340-375, 381, 382 or 384-472, or a complement of any of the foregoing polynucleotides;
 - (b) detecting in the sample an amount of polypeptide that binds to the binding agent;
 - (c) repeating steps (a) and (b) using a biological sample obtained from the patient at a subsequent point in time; and
 - (d) comparing the amount of polypeptide detected in step (c) to the amount detected in step (b) and therefrom monitoring the progression of the cancer in the patient.
63. A method according to claim 62, wherein the binding agent is an antibody.
64. A method according to claim 63, wherein the antibody is a monoclonal antibody.
65. A method according to claim 62, wherein the cancer is a prostate cancer.
66. A method for determining the presence or absence of a cancer in a patient, comprising the steps of:
- (a) contacting a biological sample obtained from a patient with an oligonucleotide that hybridizes to a polynucleotide that encodes a prostate tumor protein, wherein the tumor protein comprises an amino acid sequence that is encoded by a polynucleotide sequence recited in any one of SEQ ID NOs:1-111, 115-171, 173-175, 177, 179-305, 307-315, 326, 328, 330, 332-335, 340-375, 381, 382 or 384-472, or a complement of any of the foregoing polynucleotides;
 - (b) detecting in the sample an amount of a polynucleotide that hybridizes to the oligonucleotide; and

(c) comparing the amount of polynucleotide that hybridizes to the oligonucleotide to a predetermined cut-off value, and therefrom determining the presence or absence of a cancer in the patient.

67. A method according to claim 66, wherein the amount of polynucleotide that hybridizes to the oligonucleotide is determined using a polymerase chain reaction.

68. A method according to claim 66, wherein the amount of polynucleotide that hybridizes to the oligonucleotide is determined using a hybridization assay.

69. A method for monitoring the progression of a cancer in a patient, comprising the steps of:

(a) contacting a biological sample obtained from a patient with an oligonucleotide that hybridizes to a polynucleotide that encodes a prostate tumor protein, wherein the tumor protein comprises an amino acid sequence that is encoded by a polynucleotide sequence recited in any one of SEQ ID NOs:1-111, 115-171, 173-175, 177, 179-305, 307-315, 326, 328, 330, 332-335, 340-375, 381, 382 or 384-472, or a complement of any of the foregoing polynucleotides;

(b) detecting in the sample an amount of a polynucleotide that hybridizes to the oligonucleotide;

(c) repeating steps (a) and (b) using a biological sample obtained from the patient at a subsequent point in time; and

(d) comparing the amount of polynucleotide detected in step (c) to the amount detected in step (b) and therefrom monitoring the progression of the cancer in the patient.

70. A method according to claim 69, wherein the amount of polynucleotide that hybridizes to the oligonucleotide is determined using a polymerase chain reaction.

71. A method according to claim 69, wherein the amount of polynucleotide that hybridizes to the oligonucleotide is determined using a hybridization assay.

72. A diagnostic kit, comprising:

(a) one or more antibodies according to claim 21; and

(b) a detection reagent comprising a reporter group.

73. A kit according to claim 72, wherein the antibodies are immobilized on a solid support.

74. A kit according to claim 73, wherein the solid support comprises nitrocellulose, latex or a plastic material.

75. A kit according to claim 72, wherein the detection reagent comprises an anti-immunoglobulin, protein G, protein A or lectin.

76. A kit according to claim 72, wherein the reporter group is selected from the group consisting of radioisotopes, fluorescent groups, luminescent groups, enzymes, biotin and dye particles.

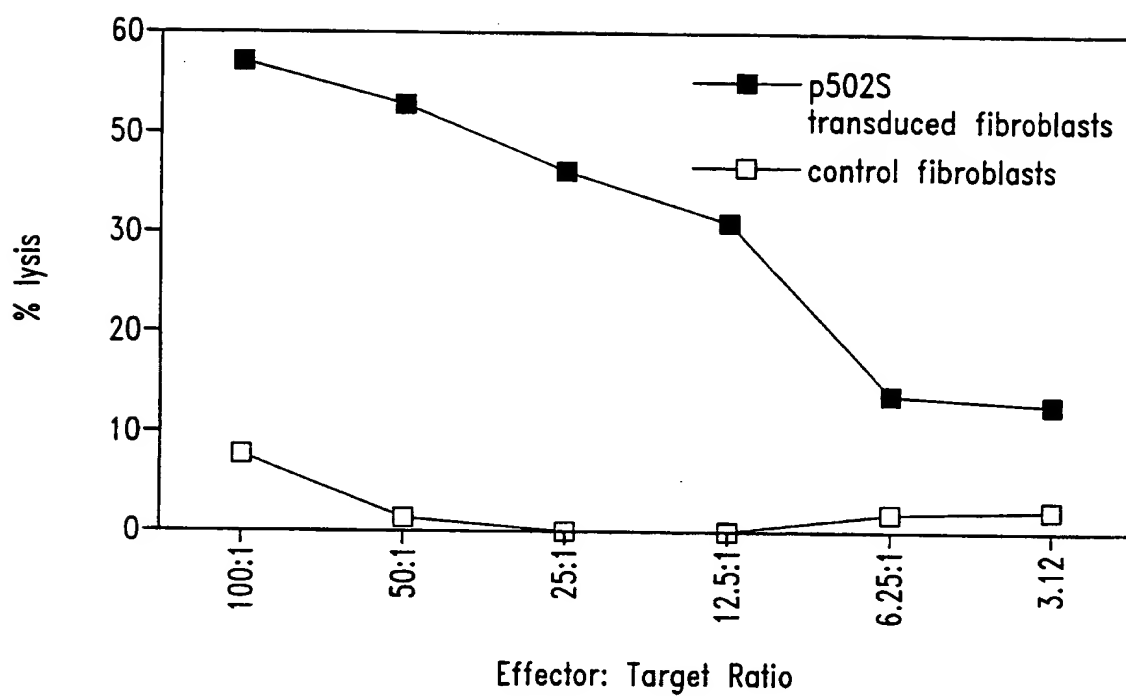
77. An oligonucleotide comprising 10 to 40 nucleotides that hybridize under moderately stringent conditions to a polynucleotide that encodes a prostate tumor protein, wherein the tumor protein comprises an amino acid sequence that is encoded by a polynucleotide sequence recited in any one of SEQ ID NOs:2, 3, 8-29, 41-45, 47-52, 54-65, 70, 73-74, 79, 81, 87, 90, 92, 93, 97, 103, 104, 107, 109-111, 115-160, 171, 173-175, 177, 181, 188, 191, 193, 194, 198, 203, 204, 207, 209, 220, 222-225, 227-305, 307-315, 326, 328, 330, 332, 334, 350-365, 381, 382, 384, 386, 389, 390, 392, 393, 396, 401, 402, 407, 408, 410, 413, 415-419, 422, 426, 427, 432, 434, 435, 442-444, 446, 450, 452, 453, 459-461, 468-471 or 472, or a complement of any of the foregoing polynucleotides.

78. A oligonucleotide according to claim 77, wherein the oligonucleotide comprises 10-40 nucleotides recited in any one of SEQ ID NOs:2, 3, 8-29, 41-45, 47-52, 54-65, 70, 73-74, 79, 81, 87, 90, 92, 93, 97, 103, 104, 107, 109-111, 115-160, 171, 173-175, 177, 181, 188, 191, 193, 194, 198, 203, 204, 207, 209, 220, 222-225, 227-305, 307-315, 326, 328, 330, 332, 334, 350-365, 381, 382, 384, 386, 389, 390, 392, 393, 396, 401, 402, 407, 408, 410, 413, 415-419, 422, 426, 427, 432, 434, 435, 442-444, 446, 450, 452, 453, 459-461, 468-471 or 472.

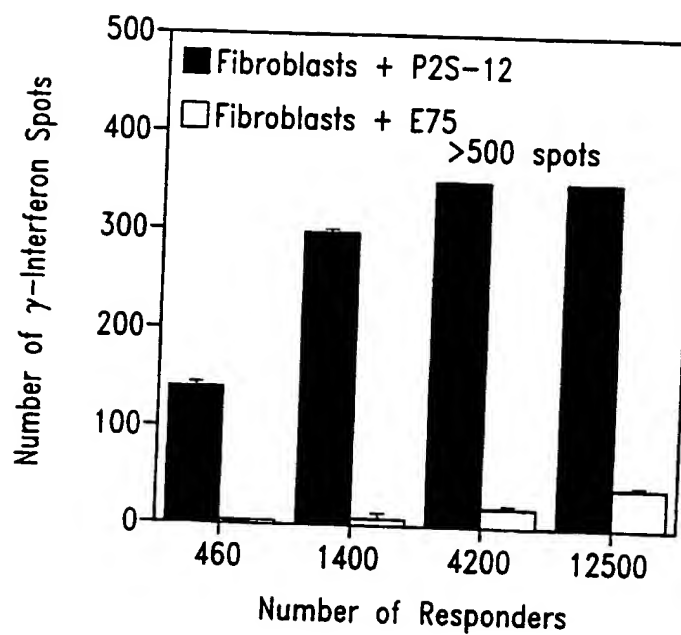
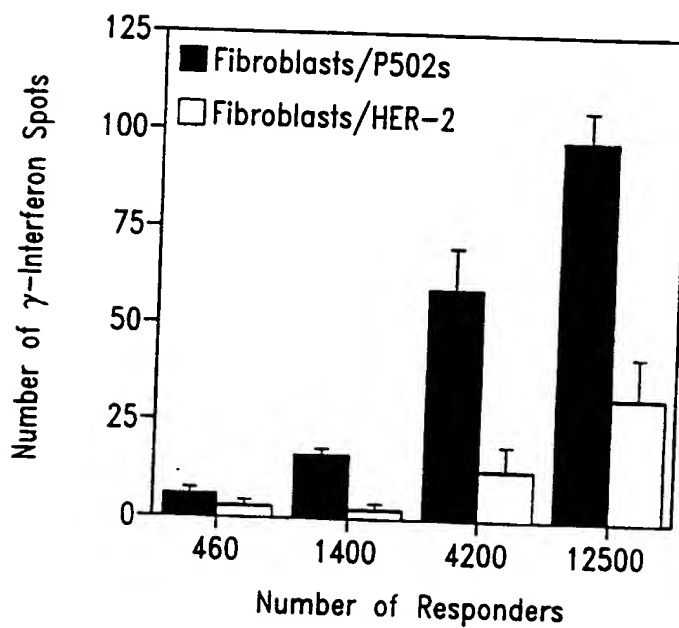
79. A diagnostic kit, comprising:

- (a) an oligonucleotide according to claim 77; and
- (b) a diagnostic reagent for use in a polymerase chain reaction or hybridization assay.

1/5

*Fig. 1*

2/5

*Fig. 2A**Fig. 2B*

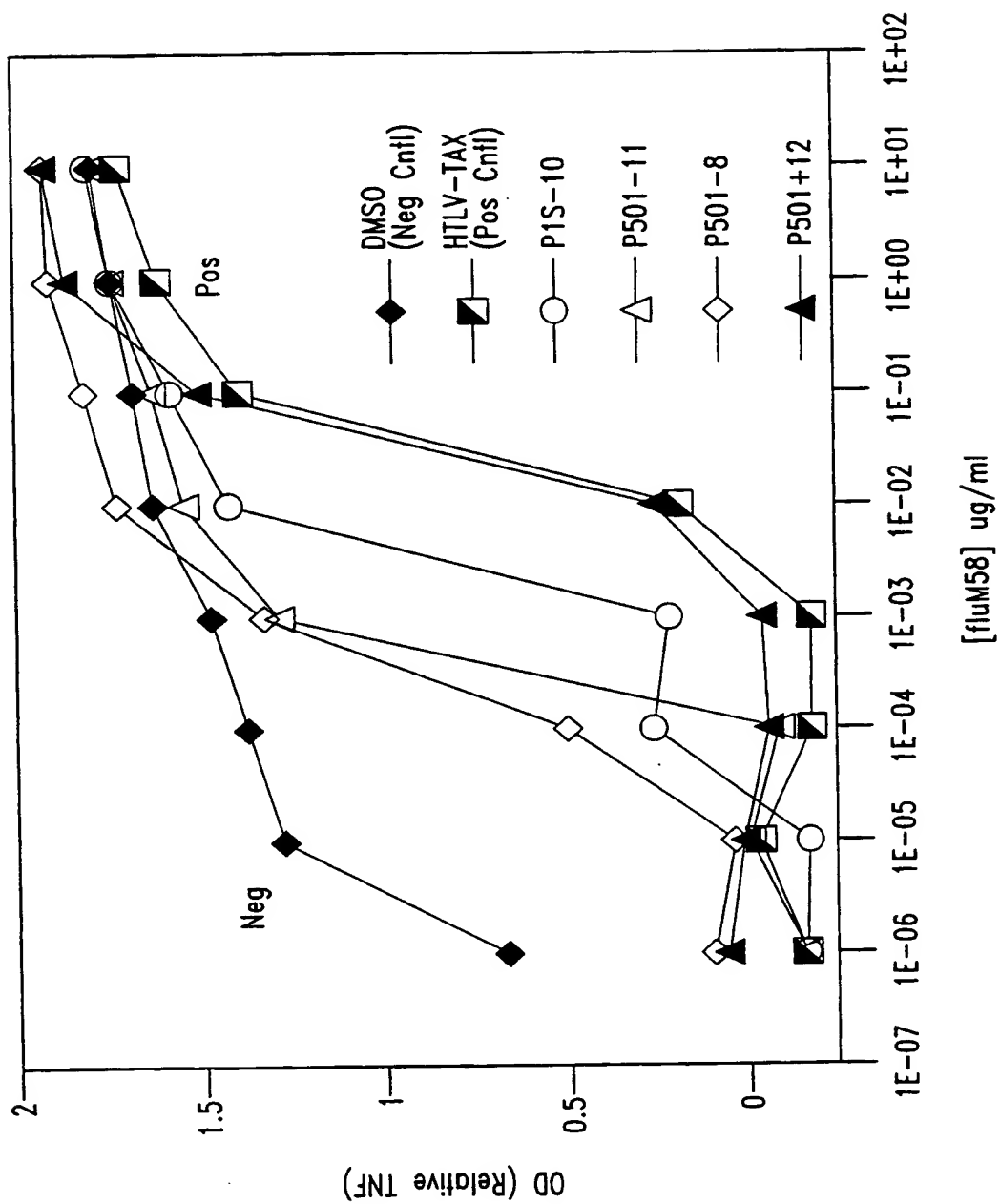
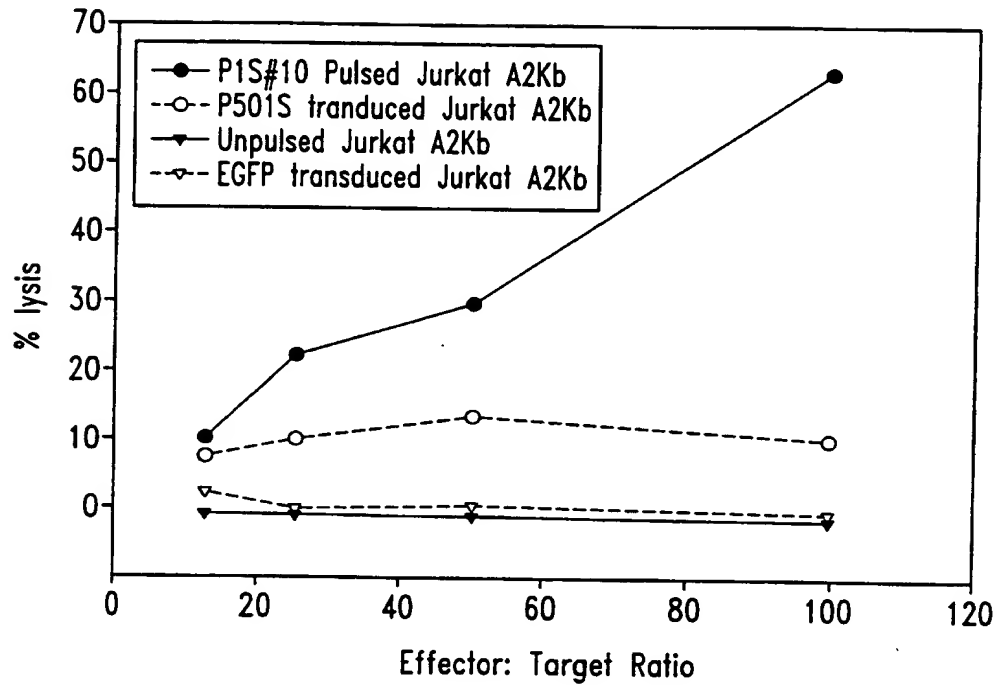
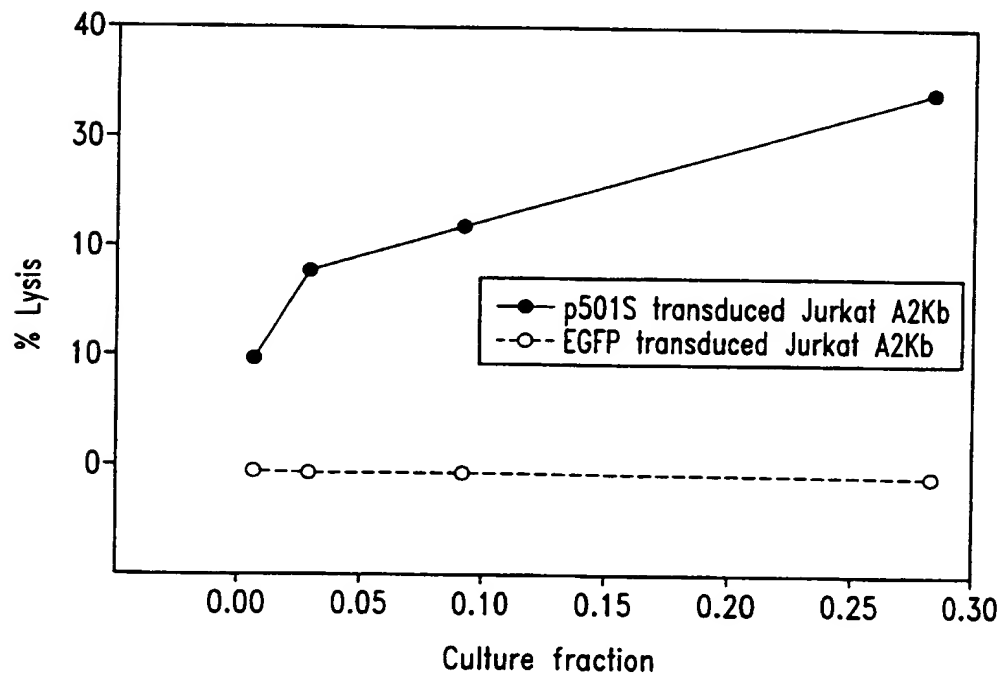


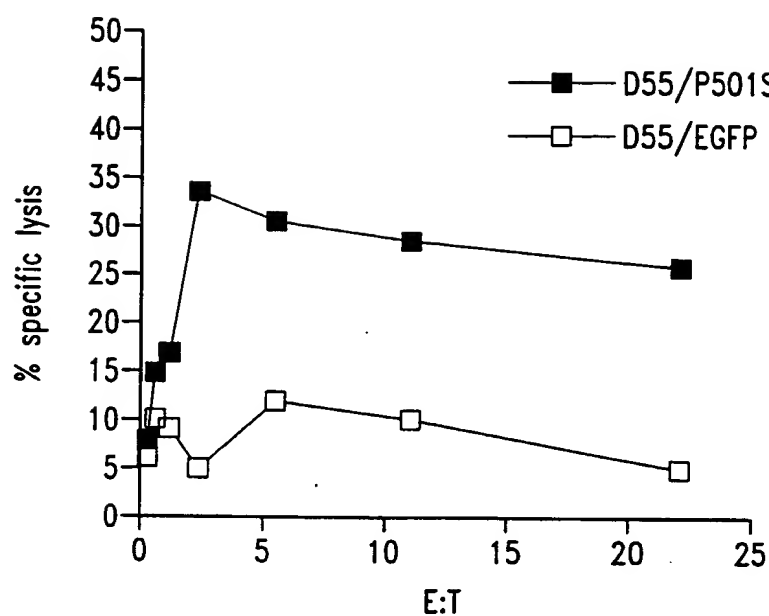
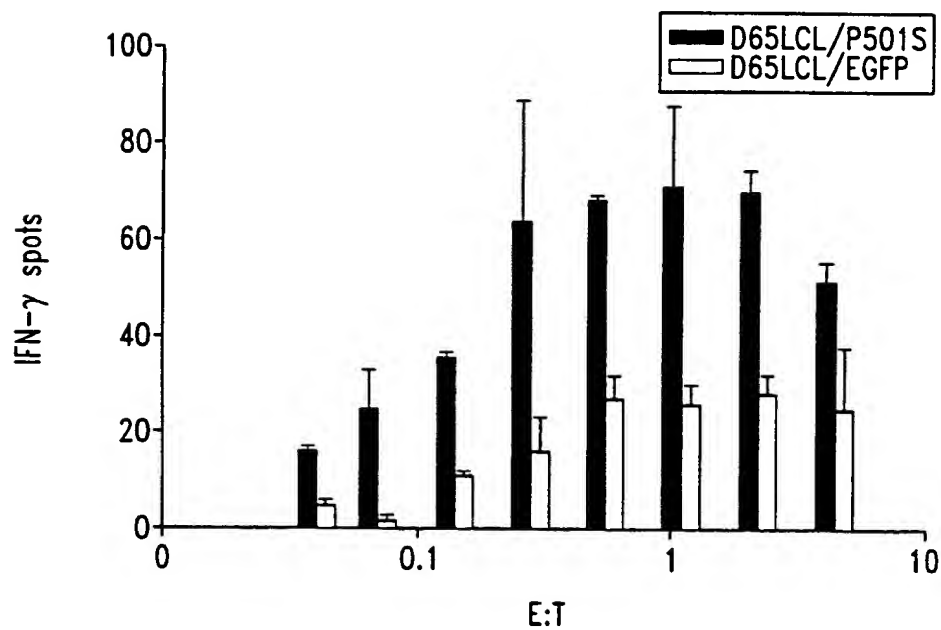
Fig. 3

4/5

*Fig. 4**Fig. 5*

SUBSTITUTE SHEET (RULE 26)

5/5

*Fig. 6**Fig. 7*

SUBSTITUTE SHEET (RULE 26)

SEQUENCE LISTING

<110> Corixa Corporation

<120> COMPOUNDS FOR IMMUNOTHERAPY AND DIAGNOSIS
OF PROSTATE CANCER AND METHODS FOR THEIR USE

<130> 210121.42701PC

<140> PCT

<141> 1999-07-08

<160> 472

<170> FastSEQ for Windows Version 3.0

<210> 1

<211> 814

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(814)

<223> n = A,T,C or G

<400> 1

tttttttttt	tttttcacag	tataacagct	ctttatttct	gtgagttcta	ctaggaaatc	60
atcaaactcg	agggttgtct	ggaggacttc	aatacacctc	cccccatagt	gaatcagctt	120
ccagggggtc	cagtcctctc	ccttacttca	tccccatccc	atgccaaagg	aagaccctcc	180
ctccttggtc	cacagccttc	tctaggcttc	ccagtgcctc	caggacagag	tgggttatgt	240
tttcagctcc	atccttgctg	tgagtgtctg	gtgcgttggtg	cctccagctt	ctgctcagtg	300
cttcatggac	agtgtccagc	acatgtcact	ctccactctc	tcagtgtgga	tccactagtt	360
ctagagcggc	cgccaccgcg	gtggagctcc	agcttttggt	cccttttagtg	agggttaatt	420
gcgcgcttgg	cgtaatcatg	gtcataactg	tttctgtgtg	gaaattgtta	tccgctcaca	480
attccacaca	acatacgagc	cggaagcata	aagtgtaaag	cctgggggtgc	ctaatagagtg	540
anctaactca	cattaattgc	gttgcgctca	ctgnccgctt	tccagtcngg	aaaactgtcg	600
tgccagctgc	attaatgaat	cggccaacgc	ncggggaaaa	gcggtttgcg	ttttgggggc	660
tcttccgctt	ctcgtcact	nantcctgcg	ctcggtcntt	cggctgcggg	gaacggtatc	720
actcctcaaa	ggnggtatta	cggttatccn	naaatcnggg	gatacccngg	aaaaaanttt	780
aacaaaaggg	cancaaaggg	cngaaacgta	aaaa			814

<210> 2

<211> 816

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(816)

<223> n = A,T,C or G

<400> 2

acagaaatgt	tggatggtgg	agcacctttc	tatacgactt	acaggacagc	agatggggaa	60
ttcatggctg	ttggagcaat	agaacccccag	ttctacgagc	tgctgatcaa	aggactrgga	120

ctaaagtctg	atgaacttcc	caatcagatg	agcatggatg	attggccaga	aatgaagaag	180
aagtttgtag	atgtatttgc	aaagaagacg	aaggcagagt	ggtgtcaaat	ctttgacggc	240
acagatgcct	gtgtgactcc	ggttctgact	tttgaggagg	ttgttcatca	tgatcacaac	300
aaggaacggg	gctcgtttat	caccagttag	gagcaggacg	tgagcccccg	ccctgcacct	360
ctgctgttaa	acaccccagc	catcccttct	ttcaaaaggg	atccactagt	tctagaagcg	420
gccgccaccg	cggtggagct	ccagcttttg	ttcccttttag	tgagggttaa	ttgcgcgctt	480
ggcgtaatac	tggtcatagc	tgtttctgtg	gtgaaattgt	tatccgctca	caattccccc	540
aacatacgag	ccggaacata	aagtgttaag	cctgggggtgc	ctaatacantg	agctaactcn	600
cattaattgc	gttgcgctca	ctgcccgctt	tccagtcggg	aaaactgtcg	tgccactgen	660
ttantgaatc	ngccaccccc	cgggaaaagg	cggttgcntt	ttgggcctct	tccgctttcc	720
tcgctcattg	atcctngcnc	ccggtcttcg	gctgcggnga	acggttcact	cctcaaaggc	780
ggtntnccgg	ttatccccaa	acnggggata	cccnga			816

<210> 3
 <211> 773
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(773)
 <223> n = A,T,C or G

cttttgaaaag	aagggatggc	tgggggtgttt	aacagcagag	gtgcagggcg	ggggctcacg	60
tcctgctcct	cactgggtgat	aaacgagccc	cgttccttgt	tgtgatcatg	atgaacaacc	120
tcctcaaaaag	tcagaaccgg	agtcacacag	gcatctgtgc	cgtcaaagat	ttgacaccac	180
tctgccttcg	tcttctttgc	aaatacatct	gcaaacttct	tcttcatttc	tgcccaatca	240
tccatgctca	tctgattggg	aagttcatca	gacttttagtc	canntccttt	gatcagcagc	300
tcgtagaact	ggggttctat	tgtctcaaca	gccatgaatt	ccccatctgc	tgtcctgtaa	360
gtcgtataga	aaggtgctcc	accatccaac	atgttctgtc	ctcgaggggg	ggcccggtag	420
ccaattcgcc	ctatantgag	tcgtattacg	cgcgctcact	ggccgctcgt	ttacaacgtc	480
gtgactggag	aaaccctggg	cgttaccaac	ttaatcgcc	tgcagcacat	ccccctttcg	540
ccagctgggc	gtaatannga	aaaggcccg	accgatcgcc	cttccaacag	ttgcgcacct	600
gaatgggnaa	atgggacccc	cctgttaccg	cgcattnaac	ccccgcnggg	tttngttgtt	660
acccccacnt	nnaccgctta	cactttgcca	gcgccttanc	gcccgcctcc	tttcnccttt	720
cttcccttcc	tttcnncncn	ctttcccccg	gggtttcccc	cntcaaacc	cna	773

<210> 4
 <211> 828
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(828)
 <223> n = A,T,C or G

cctcctgagt	cctactgacc	tgtgctttct	ggtgtggagt	ccagggctgc	taggaaaagg	60
aatgggcaga	cacaggtgta	tgccaatgtt	tctgaaatgg	gtataatttc	gtcctctcct	120
tcggaacact	ggctgtctct	gaagacttct	cgctcagttt	cagtgaggac	acacacaaag	180
acgtgggtga	ccatgttggt	tgtgggggtgc	agagatggga	gggggtgggg	ccaccctgga	240
agagtggaca	gtgacacaag	gtggacactc	tctacagatc	actgaggata	agctggagcc	300
acaatgcatg	aggcacacac	acagcaagga	tgacnctgta	aacatagccc	acgctgtcct	360

```

gngggcactg ggaagcctan atnagggcgt gagcanaaag aaggggagga tccactagtt 420
ctanagcggc cgccaccgcg gtgganctcc ancttttggt cccttttagtg aggggtaatt 480
gcgcgcttg ctaaatcatg gtcatanctn tttcctgtgt gaaattgtta tccgctcaca 540
attccacaca acatacganc cggaacata aantgtaaac ctgggggtgcc taatgantga 600
ctaactcaca ttaattgcgt tgcgctcact gcccgcgttc caatcnggaa acctgtcttg 660
ccncttgcat tnatgaatcn gccaaccccc ggggaaaagc gtttgcgttt tgggcgctct 720
tccgcttcct cnetcantta ntccctncnc tcggtcattc cggctgcngc aaaccgggtc 780
accncctcca aaggggggtat tccggtttcc ccnaatccgg gganancc 828

```

```

<210> 5
<211> 834
<212> DNA
<213> Homo sapien

```

```

<220>
<221> misc_feature
<222> (1)...(834)
<223> n = A,T,C or G

```

```

<400> 5
tttttttttt tttttactga tagatggaat ttattaagct tttcacatgt gatagcacat 60
agttttaatt gcatccaaag tactaacaaa aactctagca atcaagaatg gcagcatggt 120
attttataac aatcaacacc tgtggctttt aaaatttggt tttcataaga taattttatac 180
tgaagtaaat ctagccatgc ttttaaaaaa tgctttaggt cactccaagc ttggcagtta 240
acatttgcca taaacaataa taaaacaatc acaatttaat aaataacaaa tacaacattg 300
tagggcataa tcatatacag tataaggaaa aggtggtagt gttgagtaag cagttattag 360
aatagaatac cttggcctct atgcaaatat gtctagacac tttgattcac tcagccctga 420
cattcagttt tcaaagtagg agacagggtc tacagtatca ttttacagtt tccaacacat 480
tgaaaacaag tagaaaatga tgagttgatt tttattaatg cattacatcc tcaagagtta 540
tcaccaaccc ctcagttata aaaaattttc aagttatatt agtcatataa cttggtgtgc 600
ttatttttaa ttagtgctaa atggattaag tgaagacaac aatgggtccc taatgtgatt 660
gatattggtc atttttacca gcttctaaat ctnaactttc aggcttttga actggaacat 720
tgnatnacag tgttccanag ttncaaccta ctggaacatt acagtgtgct tgattcaaaa 780
tgttattttg ttaaaaatta aattttaacc tggtggaata ataatttgaa atna 834

```

```

<210> 6
<211> 818
<212> DNA
<213> Homo sapien

```

```

<220>
<221> misc_feature
<222> (1)...(818)
<223> n = A,T,C or G

```

```

<400> 6
tttttttttt tttttttttt aagaccctca tcaatagatg gagacatata gaaatagtca 60
aaccacatct acaaaatgcc agtatcaggc ggcggcttcg aagccaaagt gatgtttgga 120
tgtaaagtga aatattagtt ggcggatgaa gcagatagtg aggaaagttag agccaataat 180
gacgtgaagt ccgtggaagc ctgtggctac aaaaaatgtt gagccgtaga tgccgctcga 240
aatggtgaag ggagactcga agtactctga ggcttgtagg agggtaaaat agagacccag 300
taaaattgta ataagcagtg cttgaattat ttggtttcgg ttgttttcta ttagactatg 360
gtgagctcag gtgattgata ctcctgatgc gagtaatacg gatgtgttta ggagtgggac 420
ttctagggga tttagcgggg tgatgcctgt tggggggccag tgccctccta gttggggggg 480
aggggctagg ctggagtggg aaaaggctca gaaaaatcct gcgaagaaaa aaacttctga 540

```

ggtaataaat	aggattatcc	cgtatcgaag	gccttttttg	acaggtggtg	tgtggtggcc	600
ttggtatgtg	ctttctcgtg	ttacatcgcg	ccatcattgg	tatatgggta	gtgtgttggg	660
ttantanggc	ctantatgaa	gaacttttgg	antggaatta	aatcaatngc	ttggccggaa	720
gtcattanga	nggctnaaaa	ggccctgtta	ngggtctggg	ctnggtttta	cccnacccat	780
ggaatncncc	ccccggacna	ntgnatccct	attcttaa			818

<210> 7
 <211> 817
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(817)
 <223> n = A,T,C or G

<400> 7						
tttttttttt	tttttttttt	tggctctaga	gggggtagag	ggggtgctat	agggtaaata	60
cgggccctat	ttcaaagatt	tttaggggaa	ttaattctag	gacgatgggt	atgaaactgt	120
ggtttgctcc	acagatttca	gagcattgac	cgtagtatac	ccccggtcgt	gtagcgggta	180
aagtgggttg	gttttagacgt	ccgggaattg	catctgtttt	taagcctaata	gtggggacag	240
ctcatgagtg	caagacgtct	tgtgatgtaa	ttattatacn	aatgggggct	tcaatcggga	300
gtactactcg	attgtcaacg	tcaaggagtc	gcaggtcgcc	tggttctagg	aataatgggg	360
gaagtatgta	ggaattgaag	attaatccgc	cgtagtcggg	gttctcctag	gttcaatacc	420
attggtggcc	aattgatttg	atggtaaggg	gagggatcgt	tgaactcgtc	tgttatgtaa	480
aggatncctt	ngggatggga	aggcnatnaa	ggactangga	tnaatggcgg	gcangatatt	540
tcaaacngtc	tctanttcct	gaaacgtctg	aaatgttaata	aanaattaan	tttngttatt	600
gaatnttnng	gaaaagggct	tacaggacta	gaaaccaaata	angaaaanta	atnntaangg	660
cnttatcntn	aaaggttnata	accnctccta	tnatcccacc	caatngnatt	ccccacncnn	720
acnattggat	nccccanttc	canaaanggc	cnccccccg	tgnannccnc	cttttgttcc	780
cttnantgan	ggttattcnc	ccctngcntt	atcancec			817

<210> 8
 <211> 799
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(799)
 <223> n = A,T,C or G

<400> 8						
catttccggg	tttactttct	aaggaaagcc	gagcggaagc	tgctaacgtg	ggaatcgggtg	60
cataaggaga	actttctgct	ggcacgcgct	agggacaagc	gggagagcga	ctccgagcgt	120
ctgaagcgca	cgtcccagaa	ggtggacttg	gcactgaaac	agctgggaca	catccgcgag	180
tacgaacagc	gcctgaaagt	gctggagcgg	gaggtccagc	agtgtagccg	cgtcctgggg	240
tgggtggccg	angcctganc	cgctctgcct	tgctgcccc	angtgggccg	ccacccccctg	300
acctgcctgg	gtccaaacac	tgagccctgc	tggcggactt	caagganaac	ccccacangg	360
ggattttgct	cctanantaa	ggctcatctg	ggcctcggcc	ccccacctg	gttggccttg	420
tctttgangt	gagccccatg	tccatctggg	ccactgtcng	gaccaccttt	ngggagtgtt	480
ctccttacaa	ccacannatg	cccggctcct	cccggaaacc	antcccancc	tgngaaggat	540
caagnccctgn	atccactnnt	nctanaaccg	gcncncnccg	cngtggaacc	cnccttntgt	600
tccttttcnt	tnagggttaa	tnnecgcttg	gccttnccan	ngtcctncnc	nttttccnnt	660
gttnaaattg	ttangcnccc	nccnntcccn	cnnnnnnan	cccgaccenn	annntnnann	720

ncctgggggt nccnncngat tgaccenncc nccctntant tgcnttnggg ncnntgccc 780
ctttccctct nggganncg 799

<210> 9
<211> 801
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> (1)...(801)
<223> n = A,T,C or G

<400> 9
acgccttgat cctcccaggc tgggactggt tctgggagga gccgggcatg ctgtgggttg 60
taangatgac actcccaaag gtggctcctga cagtggccca gatggacatg gggctcacct 120
caaggacaag gccaccaggt gcgggggccc aagcccacat gatccttact ctatgagcaa 180
aatcccctgt gggggcttct ccttgaagtc cgccancagg gctcagtctt tggaccang 240
caggtcatgg ggttgtngnc caactggggg ccncaacgca aaanggcna gggcctcngn 300
caccatccc angacgcggc tacactnctg gacctccnc tccaccactt tcatgcgctg 360
ttcntaccg cgnatntgtc ccantgttt cngtgccnac tccancttct nggacgtgcg 420
ctacatacgc cggantenc nctccgctt tgtccctatc cacgtncan caacaaattt 480
cncntantg caccnattcc cacntttnc agntttccnc nncgngcttc cttntaaaag 540
ggttganccc cggaaaatnc cccaaagggg gggggccngg tacccaactn cccctnata 600
gctgaantcc ccatnaccnn gnctcnatgg ancntcent tttaannacn ttctnaactt 660
gggaananc ctcgnccntn ccccnttaa tccnccttg cnangnnent ccccnntcc 720
nccnnntng gcntntnann cnaaaaaggc ccnnnancaa tctcctnnen cctcanttcg 780
ccanccctcg aaatcgccn c 801

<210> 10
<211> 789
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> (1)...(789)
<223> n = A,T,C or G

<400> 10
cagtctatnt ggccagtgtg gcagctttcc ctgtggctgc cgggtgccaca tgccctgtccc 60
acagtgtggc cgtggtgaca gcttcagccg ccctcaccgg gtacaccttc tcagccctgc 120
agatcctgcc ctacacactg gcctccctct accaccggga gaagcagggtg ttcctgccc 180
aataccgagg ggacactgga ggtgctagca gtgaggacag cctgatgacc agcttcctgc 240
caggccctaa gcctggagct cccttcctta atggacacgt ggggtgctgga ggcagtggcc 300
tgctcccacc tccaccgcg ctctgcgggg cctctgcctg tgatgtctcc gtacgtgtgg 360
tggtggtgga gcccaccgan gccagggtgg ttccgggccc gggcatctgc ctggacctcg 420
ccatccttga tagtgcttcc tgctgtccca ngtggcccca tccctgttta tgggtccat 480
tgtccagctc agccagtctg tcaactgccta tatggtgtct gccgcaggcc tgggtctgg 540
cccatctact ttgctacaca ggtantattt gacaagaacg anttgccaa atactcagc 600
ttaaaaaatt ccagcaacat tgggggtgga aggcctgcct cactgggtcc aactcccg 660
tctgttaac cccatggggc tgccggcttg gccgccaatt tctgttgctg ccaaantnat 720
gtggctctct gctgccacct gttgctggct gaagtgcnta cngcncanct nggggggtng 780
ggngttccc 799

<210> 11
 <211> 772
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(772)
 <223> n = A,T,C or G

<400> 11

cccaccctac	ccaaatatta	gacaccaaca	cagaaaagct	agcaatggat	tcccttctac	60
tttggttaaat	aaataagtta	aatattttaa	tgctgtgtgc	tctgtgatgg	caacagaagg	120
accaacaggc	cacatcctga	taaaaggtaa	gaggggggtg	gatcagcaaa	aagacagtgc	180
tgtgggctga	ggggacctgg	ttcttgtgtg	ttgcccctca	ggactcttcc	cctacaaata	240
actttcatat	gttcaaattcc	catggaggag	tgtttcatcc	tagaaactcc	catgcaagag	300
ctacattaaa	cgaagctgca	ggtaagggg	cttanagatg	ggaaaccagg	tgactgagtt	360
tattcagctc	ccaaaaaccc	ttctctaggt	gtgtctcaac	taggaggcta	gctgttaacc	420
ctgagcctgg	gtaatccacc	tgcagagtcc	ccgcattcca	gtgcatggaa	cccttctggc	480
ctccctgtat	aagtccagac	tgaaaccccc	ttggaaggnc	tccagtcagg	cagccctana	540
aactgggggaa	aaaagaaaaag	gacgccccan	ccccagctg	tgcantacg	cacctcaaca	600
gcacaggggtg	gcagcaaaaaa	aaccacttta	ctttggcaca	aacaaaaact	ngggggggga	660
accccgggcac	cccnangggg	gttaacagga	ancngggnaa	cntggaaccc	aattnaggca	720
ggccccnccac	ccnnaatntt	gctgggaaat	tttctctccc	ctaaattntt	tc	772

<210> 12
 <211> 751
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(751)
 <223> n = A,T,C or G

<400> 12

gccccaatc	cagctgccac	accacccacg	gtgactgcat	tagttcggat	gtcatacaaaa	60
agctgattga	agcaaccctc	tacttttttg	tcgtgagcct	tttgcttggg	gcagggtttca	120
ttggctgtgt	tggtgacgtt	gtcattgcaa	cagaatgggg	gaaaggcact	gttctctttg	180
aagtanggtg	agtcctcaaa	atccgtatag	ttggtgaagc	cacagcactt	gagccctttc	240
atgggtgggtg	tccacacttg	agtgaagtct	tcctgggaac	cataatcttt	cttgatggca	300
ggcactacca	gcaacgtcag	ggaagtgtc	agccattgtg	gtgtacacca	aggcgaccac	360
agcagctgcn	acctcagcaa	tgaagatgan	gaggangatg	aagaagaacg	tcncgagggc	420
acacttgctc	tcagtcttan	caccatanca	gcccntgaaa	accaananca	aagaccacna	480
cnccggctgc	gatgaagaaa	tnaccccneg	ttgacaaaact	tgcatggcac	tggganccac	540
agtggcccn	aaaatcttca	aaaaggatgc	cccatcnatt	gaccccccaa	atgcccactg	600
ccaacagggg	ctgccccacn	cncnnaacga	tgancnatt	gnacaagatc	tnentggctc	660
tnatnaacnt	gaaccctgcn	tngtggctcc	tgttcaggnc	cnnggcctga	cttctnaann	720
aangaactcn	gaagncccca	cngganann	g			751

<210> 13
 <211> 729
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(729)
 <223> n = A,T,C or G

<400> 13

gagccaggcg	tcctctgcc	tgccactca	gtggcaacac	ccgggagctg	ttttgtcctt	60
tgtggancct	cagcagtncc	ctctttcaga	actcantgcc	aaganccctg	aacaggagcc	120
accatgcagt	gcttcagctt	cattaagacc	atgatgatcc	tcttcaattt	gctcatcttt	180
ctgtgtggtg	cagccctgtt	ggcagtgggc	atctgggtgt	caatcgatgg	ggcatccttt	240
ctgaagatct	tcggggccact	gtcgtccagt	gccatgcagt	ttgtcaacgt	gggctacttc	300
ctcatcgag	ccggcggtgt	ggtcttagct	ctaggtttcc	tgggctgcta	tgggtgctaag	360
actgagagca	agtgtgccct	cgtgacgttc	ttcttcatcc	tcctcctcat	cttcattgct	420
gaggttgcaa	tgtgtgggtc	gccttggtgt	acaccacaat	ggctgagcac	ttcctgacgt	480
tgtgtgtaat	gcctgccatc	aanaaaagat	tatgggttcc	caggaanact	tcactcaagt	540
gttggaacac	caccatgaaa	gggctcaagt	gctgtggctt	cnnccaacta	tacggatttt	600
gaagantcac	ctacttcaaa	gaaaaanagtg	cctttccccc	atttctgttg	caattgacaa	660
acgtccccaa	cacagccaat	tgaaaacctg	cacccaaccc	aaanggggtcc	ccaaccanaa	720
attnaaggg						729

<210> 14
 <211> 816
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(816)
 <223> n = A,T,C or G

<400> 14

tgtcttctct	caaagttggt	cttggtgcca	taacaaccac	cataggtaaa	gcgggagcag	60
tggtcgctga	aggggttgta	gtaccagcgc	gggatgctct	ccttgacagag	tcctgtgtct	120
ggcaggtcca	cgcagtggcc	tttgtcactg	gggaaatgga	tgcgctggag	ctcgtcaaag	180
ccactcgtgt	atttttcaca	ggcagcctcg	tccgacgcgt	cggggcagtt	gggggtgtct	240
tcacactcca	ggaaactgtc	natgcagcag	ccattgctgc	agcggaaactg	ggtgggctga	300
cangtgccag	agcacactgg	atggcgccct	tccatgmnan	gggcccctgng	ggaaagtccc	360
tganccccc	anctgcctct	caaangcccc	accttgacac	ccccgacagg	ctagaatgga	420
atcttcttcc	cgaaggttag	ttnttcttgt	tgccc aancc	anccccntaa	acaaactctt	480
gcanatctgc	tccngggggg	tctantacc	ancgtgggaa	aagaacccca	ggcngcgaac	540
caancttgtt	tggatncgaa	gcnataatct	ncnttcttgc	ttggtggaca	gcaccantna	600
ctgtnnanct	ttagnccntg	gtcctcntgg	gttgnncttg	aacctaatcn	ccnntcaact	660
gggacaaggt	aantngccnt	ccttttnaatt	cccnancntn	ccccctgggt	tgggggttttn	720
cncntccta	ccccagaaan	nccgtgttcc	cccccaacta	ggggccnaaa	ccnnttnttc	780
cacaacctn	ccccacccac	gggttcngnt	ggttng			816

<210> 15
 <211> 783
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(783)
 <223> n = A,T,C or G

<400> 15

ccaaggcctg	ggcaggcata	nacttgaagg	tacaacccca	ggaacccctg	gtgctgaagg	60
atgtggaaaa	cacagattgg	cgcctactgc	ggggtgacac	ggatgtcagg	gtagagagga	120
aagacccaaa	ccaggtggaa	ctgtggggac	tcaaggaang	cacctacctg	ttccagctga	180
cagtgactag	ctcagaccac	ccagaggaca	cggccaacgt	cacagtcact	gtgctgtcca	240
ccaagcagac	agaagactac	tgcctcgcac	ccaacaangt	gggtcgctgc	cggggctctt	300
tcccacgctg	gtactatgac	cccacggagc	agatctgcaa	gagtttcgtt	tatggaggct	360
gcttgggcaa	caagaacaac	taccttcggg	aagaagagtg	cattctancc	tgtcnggggtg	420
tgcaagggtg	gcctttgana	ngcanctctg	gggctcangc	gactttcccc	caggggccct	480
ccatggaaaag	gcgccatcca	ntggtctctg	gcacctgtca	gcccacccag	ttccgctgca	540
ncaatggctg	ctgcacnac	antttcctng	aattgtgaca	acacccccca	ntgcccccaa	600
ccctcccaac	aaagcttccc	tgttnaaaaa	tacnccantt	ggcttttnac	aaacncccg	660
cnctccntt	ttcccnntn	aacaaagggc	nctngcnttt	gaactgccc	aaacnnggaa	720
tctnccnngg	aaaaantncc	ccccctggtt	cctnnaancc	cctccncaaa	anctncccc	780
ccc						783

<210> 16

<211> 801

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(801)

<223> n = A,T,C or G

<400> 16

gccccaatc	cagctgccac	accacccacg	gtgactgcat	tagttcggat	gtcatacaaa	60
agctgattga	agcaaccctc	tacttttttg	tcgtgagcct	tttgcttggg	gcaggtttca	120
ttggctgtgt	tggtgacgtt	gtcattgcaa	cagaatgggg	gaaaggcact	gttctctttg	180
aagtaggggtg	agtcctcaaa	atccgtatag	ttgggtgaagc	cacagcactt	gagccctttc	240
atgggtgggtg	tccacacttg	agtgaagtct	tccctgggaac	cataatcttt	cttgatggca	300
ggcactacca	gcaacgtcag	gaagtgtctc	gccatttgtg	tgtacaccaa	ggcgaccaca	360
gcagctgcaa	cctcagcaat	gaagatgagg	aggaggatga	agaagaacgt	cncgagggca	420
cacttgctct	ccgtcttagc	accatagcag	cccangaaac	caagagcaaa	gaccacaacg	480
ccngctgcga	atgaaagaaa	ntacccacgt	tgacaaactg	catggccact	ggacgacagt	540
tgccccgaan	atcttcagaa	aagggatgcc	ccatcgattg	aacacccana	tgcccactgc	600
cnacagggct	gcncncncn	gaaagaatga	gccattgaag	aaggatcntc	ntggtcttaa	660
tgaactgaaa	centgcatgg	tggccccctg	tcagggtctct	tggcagtga	ttctganaaa	720
aaggaacngc	ntnagcccc	ccaaangana	aaacaccccc	gggtgttgcc	ctgaattggc	780
ggccaaggan	ccctgccccn	g				801

<210> 17

<211> 740

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(740)

<223> n = A,T,C or G

<400> 17

gtgagagcca	ggcgccctc	tgccctgcca	ctcagtgcca	acacccggga	gctgttttgt	60
------------	-----------	------------	------------	------------	------------	----

cctttgtgga	gcctcagcag	tccctcttt	cagaactcac	tgccaagagc	cctgaacagg	120
agccaccatg	cagtgcattca	gcttcattaa	gaccatgatg	atcctcttca	atttgcctcat	180
ctttctgtgt	ggtgcagccc	tggtggcagt	gggcatctgg	gtgtcaatcg	atggggcatc	240
ctttctgaag	atcttcgggc	cactgtcgtc	cagtgccatg	cagtttgtca	acgtgggcta	300
cttcctcatc	gcagccggcg	ttgtggtctt	tgtctcttgg	ttcctgggct	gctatgggtg	360
taagacggag	agcaagtgtg	ccctcgtgac	gttcttcttc	atcctcctcc	tcattcttcat	420
tgctgaagt	gcagctgctg	tggtcgctt	ggtgtacacc	acaatggctg	aaccattcct	480
gacgttgctg	gtantgcctg	ccatcaanaa	agattatggg	ttcccaggaa	aaattcactc	540
aantntggaa	caccnccatg	aaaagggctc	caatttctgn	tggttcccc	aactataccg	600
gaattttgaa	agantcnccc	tacttccaaa	aaaaaanant	tgcttttnc	ccntttctgt	660
tgcaatgaaa	acntcccaan	acngccaatn	aaaacctgcc	cnnncaaaaa	ggntcncaaa	720
caaaaaaant	nnaagggttn					740

<210> 18
 <211> 802
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1) ... (802)
 <223> n = A,T,C or G

<400> 18		
ccgctgggtg	cgctgggtcca gngnagccac gaagcacgtc agcatacaca gcctcaatca 60	
caaggtcttc	cagctgccgc acattacgca gggcaagagc ctccagcaac actgcatatg 120	
ggatacactt	tacttttagca gccagggtga caactgagag gtgtcgaagc ttattcttct 180	
gagcctctgt	tagtggagga agattccggg cttcagctaa gtagtcagcg tatgtcccat 240	
aagcaaacac	tgtgagcagc cggaaggtag aggcaaagtc actctcagcc agctctctaa 300	
cattgggcat	gtccagcagt tctccaaaca cgtagacacc agnggcctcc agcacctgat 360	
ggatgagtgt	ggccagcgct gcccccttgg ccgacttggc taggagcaga aattgctcct 420	
ggttctgccc	tgtcaccttc acttcgcgac tcatcactgc actgagtgtg ggggacttgg 480	
gctcaggatg	tccagagacg tggttccgcc ccctcnctta atgacaccgn ccanncaacc 540	
gtcggctccc	gccgantgng ttcgtcgtnc ctgggtcagg gtctgctggc cinctacttgc 600	
aancttcgtc	nggcccattg aattcaccnc accggaactn gtangatcca ctntttctat 660	
aaccggnccg	caccgcnnnt ggaactccac tcttnttnc tttacttgag ggtaagggtc 720	
acccttnncc	ttaccttggg ccaaaccntn cctgtgtcgt anantngtnaa tcnggncnna 780	
tnccancnc	atangaagcc ng	802

<210> 19
 <211> 731
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1) ... (731)
 <223> n = A,T,C or G

<400> 19	
cnaagcttcc	aggtnacggg ccgcnaancc tgaccnagg tancanaang cagnncgagg 60
gagcccaccg	tcacgnggng gngtctttat nggagggggc ggagccacat cnetggacnt 120
cntgaccca	actccccncc ncnantgca gtgatgagtg cagaactgaa ggtnacgtgg 180
caggaaccaa	gancaaannc tgctccntc caagtcggcn nagggggcgg ggctggccac 240
gcncatccnt	cnagtgtcgn aaagccccnn cctgtctact tgtttggaga acngcnnnga 300

catgcccagn	gttanataac	nggcngagag	tnantttgcc	tctcccttcc	ggctgcgcan	360
cgngtntgct	tagnggacat	aacctgacta	cttaactgaa	cccnngaatac	tnccnccccct	420
ccactaagct	cagaacaaaa	aacttcgaca	ccactcantt	gtcacctgnc	tgctcaagta	480
aagtgtaccc	catncccaat	gtntgctnga	ngctctgncc	tgcntttangt	tcggtcctgg	540
gaagacctat	caattnaagc	tatgtttctg	actgcctctt	gctccctgna	acaancnacc	600
cnncnntcca	agggggggnc	ggcccccaat	ccccccaacc	ntnaattnan	tttancccn	660
ccccngggcc	cggcctttta	cnancntcnn	nnacngggna	aaaccnnngc	tttncccaac	720
nnaatecncc	t					731

<210> 20

<211> 754

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(754)

<223> n = A,T,C or G

<400> 20

tttttttttt	tttttttttt	taaaaacccc	ctccattnaa	tgnaaaacttc	cgaaattgtc	60
caacccccct	ntccaaatnn	ccntttccgg	gnnggggttc	caaacccean	ttanntttgg	120
annttaaatt	aaatnttntt	tgngngnnna	anccnaatgt	nangaaagtt	naaccanta	180
tnancttnaa	tnccctggaaa	ccngtngntt	caaaaaatnt	ttaaccctta	antccctccg	240
aaatngtttna	nggaaaaccc	aantttctnt	aaggttgttt	gaaggntnaa	tnaaaanccc	300
nnccaattgt	ttttngccac	gcctgaatta	attggnttcc	gntgttttcc	nttaaaanaa	360
ggnnancccc	ggttantnaa	tccccccnnc	cccaattata	ccganttttt	ttngaattgg	420
gancccnccg	gaattaacgg	ggnnnnntccc	tnttgggggg	cnggnncccc	ccccntcggg	480
ggttngggnc	aggnccnaat	tgtttaaggg	tccgaaaaat	ccctccnaga	aaaaaanctc	540
ccaggntgag	nntnggggtt	nccccccccc	cangggccct	ctcgnaagtt	tggggtttgg	600
ggggcctggg	attttntttc	ccctnttncc	tccccccccc	ccnggganag	aggttngngt	660
tttgntcnnc	ggccccnccn	aaganctttt	ccganttnan	ttaaatccnt	gcctnggcga	720
agtcctntgn	agggntaaan	ggccccctnn	cggg			754

<210> 21

<211> 755

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(755)

<223> n = A,T,C or G

<400> 21

atcancecat	gaccccnac	nnngggaccnc	tcancecggnc	nnncnaccnc	cggecnatca	60
ngtnagnnc	actncnnttn	natcacnccc	cncnactac	gcccncnanc	cnacgcncta	120
nncanatncc	actganngcg	cgangtngan	ngagaaaant	nataccanag	ncaccanacn	180
ccagctgtcc	nanaangcct	nnnatacnng	nnnatccaat	ntgnancctc	cnaagtattn	240
nncnncanat	gattttcctn	anccgattac	ccntncccc	tanccctcc	cccccaacna	300
cgaaggcnct	ggncnnaagg	nnngcgncc	ccgctagntc	cccnncnaagt	cncncncta	360
aactcancn	nattacncgc	ttcntgagta	tcactccccg	aatctcacc	tactcaactc	420
aaaaanaten	gatacaaaat	aatncaagcc	tgnttatnac	actntgactg	ggtctctatt	480
ttagnngtcc	ntnaancntc	ctaatacttc	cagtctncct	tcnccaattt	ccnaanggct	540
ctttcngaca	gcatnttttg	gttcccnntt	gggttcttan	ngaattgcc	ttcntngaac	600

gggctctctt	tttccttcgg	ttancctggn	ttcnncggc	cagttattat	ttccentttt	660
aaattctntc	cntttanttt	tggcnttcna	aacccccggc	cttgaaaacg	gccccctggg	720
aaaagggtgt	tttganaaaa	tttttgtttt	gttcc			755

<210> 22
 <211> 849
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(849)
 <223> n = A,T,C or G

<400> 22						
tttttttttt	tttttangtg	tngtcgtgca	ggtagaggct	tactacaant	gtgaanacgt	60
acgetnngan	taangcgacc	cgantttctag	gannncncc	aaaatcanac	tgtgaagatn	120
atcctgnnna	cggaanggtc	accggnngat	nntgctaggg	tgncnctcc	cannncnttn	180
cataactcng	nggccctgcc	caccaccttc	ggcgccccng	ngnccgggcc	cgggtcattn	240
gnnttaaccn	cactnngcna	ncggtttccn	ncccnncng	accnnggcga	tccgggggtnc	300
tctgtcttcc	cctgnagncn	anaaantggg	ccnccgnccc	ctttaccct	nnacaagcca	360
cngcctcta	ncncngccc	cccctccant	nngggggact	gccnanngt	ccgttntctn	420
nnaccccnnn	gggtncctcg	gttgtcgant	cnaccgnang	ccanggatc	cnaaggaagg	480
tgcgttnttg	gcccctaccc	ttcgctncgg	nnaccccttc	ccgacnanga	nccgctccc	540
cncnccgnng	cctcncctcg	caacacccgc	netctcngt	ncggnnnccc	ccccacccgc	600
ncctcncnc	ngnccgnanc	ctcncncc	gtctcannca	ccaccccgcc	ccgccaggcc	660
ntcanccacn	ggngacnng	nagcncntc	gcncgcgcgn	gcgnccct	cgcncngaa	720
ctnctcngg	ccantnncgc	tcaanccnna	cnaaacgccg	ctgcgcggcc	cgnagcgncc	780
ncctcncga	gtcctcccgn	ctccnacc	angnntccn	cgaggacacn	nnaccccgcc	840
nncangcgg						849

<210> 23
 <211> 872
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(872)
 <223> n = A,T,C or G

<400> 23						
gcgcaaaacta	tacttcgctc	gnactcgtgc	gcctcgtcnc	tcttttcctc	cgcaaccatg	60
tctgacnanc	ccgattnggc	ngatatcnan	aagntcganc	agtccaaact	gantaacaca	120
cacacnncan	aganaaatcc	netgccttcc	anagtanacn	attgaacnng	agaaccangc	180
nggcgaatcg	taatnaggcg	tgcgccgcca	atntgtcncc	gtttattntn	ccagcncnc	240
ctnccnacc	tacntcttcn	nagctgtcnn	acccctngtn	cgnaccccc	naggtcggga	300
tgggttttnn	nntgaccng	cnccccctcc	ccccctccat	nacganccnc	ccgcaccacc	360
nanngcncgc	nccccgnnet	cttcgcnc	ctgtcctntn	cccctgtngc	ctggcncngn	420
accgcattga	ccttcgccnn	ctnccngaaa	ncgnanacgt	ccgggttggn	annancgctg	480
tgggnnnngcg	tctgcncgc	gttccttcn	nenncttcca	ccatcttct	tacnggggtct	540
ccnccgcntc	tcnnncacnc	cctgggaagc	tnctctntgc	cccccttnac	tccccccctt	600
cgnccgtgncc	cgnccccacc	ntcatttnca	nacgntcttc	acaannncct	ggntnnctcc	660
cnancngncn	gtcanccnag	ggaagggngg	ggnnccnntg	nttgacgttg	nggngangtc	720
cgaanantcc	tcnccntcan	cnctaccct	cgggcgnnet	ctcngttnc	aacttancaa	780

ntctcccccg ngngcncntc tcagcctenc ccnccccnet ctctgcantg tncctctgctc 840
tnaccnntac gantnttcgn cncctcttt cc 872

<210> 24

<211> 815

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(815)

<223> n = A,T,C or G

<400> 24

gcatgcaagc	ttgagtattc	tatagngtca	cctaaatanc	ttggcntaat	catggtcnta	60
nctgncttcc	tgtgtcaa	gtatacnaa	tanatatgaa	tctnatntga	caaganngta	120
tcntncatta	gtaacaantg	tnntgtccat	cctgtcngan	canattccca	tnnattncgn	180
cgcattcncn	gcncantatn	taatngggaa	ntcnntnnn	ncaccnncat	ctatcntncc	240
gcnccttgac	tggnagagat	ggatnanttc	tnntntgacc	nacatgttca	tcttggattn	300
aanancccc	cgcngnccac	cggttngnng	cnagccntc	ccaagacctc	ctgtggaggt	360
aacctgcgtc	aganncatca	aacntgggaa	acccgcnncc	angtnnaagt	ngnnncanan	420
gateccgtcc	aggnttnacc	atcccttcnc	agcgccccct	ttngtgcctt	anagnnagc	480
gtgtccnanc	cncctcaacat	ganacgcgcc	agnccanccg	caattnggca	caatgtcgnc	540
gaaccccccta	gggggannta	tncaaanccc	caggattgtc	cncncangaa	atcccnanc	600
ccnccctac	ccnctttgg	gacngtgacc	aantcccga	gtcccagtc	ggccngnctc	660
ccccaccggt	nnccttggg	gggtgaanct	cngnntcanc	cngncgaggn	ntcgnaagga	720
accggnccctn	ggncgaanng	ancnntcnga	agngccnct	cgtataacce	cccctcncca	780
nccnacngnt	agntcccccc	cngggtnccg	aangg			815

<210> 25

<211> 775

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(775)

<223> n = A,T,C or G

<400> 25

ccgagatgtc	tcgctccgtg	gccttagctg	tgctcgcgct	actctctctt	tctggcctgg	60
aggctatcca	gcgtactcca	aagattcagg	ttactcacg	tcatccagca	gagaatggaa	120
agtcaaattt	cctgaattgc	tatgtgtctg	ggtttcaccc	atccgacatt	gaanttgtact	180
tactgaagaa	tgganagaga	attgaaaaag	tgagagcattc	agacttgtct	ttcagcaagg	240
actggtcttt	ctatctcntg	tactacactg	aattcacccc	cactgaaaaa	gatgagtatg	300
cctgcccgtg	gaaccatgtg	actttgtcac	agcccagat	agtttaagtgg	gatcgagaca	360
tgtaagcagn	cnncatggaa	gtttgaagat	gccgcatttg	gattggatga	attccaaatt	420
ctgcttgctt	gcntttta	antgatatgc	ntatacaccc	taccctttat	gnccccaaat	480
tgtaggggtt	acatnantgt	tcnctnngga	catgatcttc	ctttataant	ccnccnttcg	540
aattgcccgt	cncnngttn	ngaattgttc	cnnaaccacg	gttggctccc	ccaggtcncc	600
tcttacggaa	gggcctgggc	cnctttncaa	ggttggggga	accnaaaatt	tcncttntgc	660
ccncccncca	cnntcttgng	nncncanttt	ggaacccttc	cnattccctt	tggcctcnna	720
nccttnncta	anaaaacttn	aaancgtngc	naaanntttt	acttcccccc	ttacc	775

<210> 26

<211> 820
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(820)
 <223> n = A,T,C or G

<400> 26

anattantac	agtgtaatct	tttcccagag	gtgtgtanag	ggaacggggc	ctagaggcat	60
cccanagata	ncttatanca	acagtgcctt	gaccaagagc	tgctggggac	atttcctgca	120
gaaaagggtg	cggtcccat	cactcctcct	ctcccatagc	catcccagag	gggtgagtag	180
ccatcangcc	ttcggtgga	gggagtcang	gaaacaacan	accacagagc	anacagacca	240
ntgatgacca	tgggcgggag	cgagcctctt	ccctgnaccg	gggtggcana	nganagccta	300
nctgaggggt	cacactataa	acgttaacga	ccnagatnan	cacctgcttc	aagtgcaccc	360
ttcctacctg	acnaccagng	accnnnaact	gcngcctggg	gacagcncctg	ggancagcta	420
acnnagcact	cacctgcccc	cccattggccg	tnccgctccc	tggtcctgnc	aagggaagct	480
ccctgttgga	attncgggga	naccaaggga	nccccctcct	ccanctgtga	aggaaaaann	540
gatggaattt	tncccttccg	gcnntccccc	tcttccttta	cacgccccct	nntactentc	600
tcctctntt	ntcctgnenc	acttttnacc	ccnnnatttc	ccttnattga	tcggannctn	660
ganattccac	tnnccgctnc	cntcnatcng	naanacnaaa	nactntctna	ccnnggggat	720
gggnncctcg	ntcactctct	ctttttcnct	accnccnntt	ctttgcctct	ccttngatca	
780tccaacntc	gntggcctn	ccccccnnn	tcctttncce			

820

<210> 27
 <211> 818
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(818)
 <223> n = A,T,C or G

<400> 27

tctgggtgat	ggcctcttcc	tcctcagggg	cctctgactg	ctctggggcca	aagaatctct	60
tgtttcttct	ccgagcccca	ggcagcgggtg	attcagccct	gccaacctg	attctgatga	120
ctgcggatgc	tgtgacggac	ccaaggggca	aatagggtcc	cagggtccag	ggagggggcgc	180
ctgctgagca	cttccgcccc	tcacctgccc	cagccccctgc	catgagctct	gggctgggtc	240
tcgcctcca	gggttctgct	cttccangca	ngccancaa	tggcgctggg	ccacactggc	300
ttcttctctg	ccntccctg	gctctgante	tctgtcttcc	tgctctgtgc	angcnccttg	360
gatctcagtt	tcctctnctc	anngaactct	gtttctgann	tcttcantta	actntgantt	420
tatnaccnan	tggnctgtnc	tgtnnaactt	taatgggccc	gaccggctaa	tcctccctc	480
ntcccttcc	antcnnna	accngcttnc	cntctctcc	ccntancccg	ccnngggaanc	540
ctcctttgcc	ctnaccangg	gccnnnaccg	ccntnnctn	ggggggcng	gtnnctncnc	600
ctgntnnccc	cnctcnctn	tnctctgctc	cnnccnccn	nngcannttc	ncngtcccn	660
tnnctcttcn	ngntcgnaa	ngntcnctn	tnnnnnngcn	ngntnnctn	tcctctcnc	720
cnnntgnang	tnntnnnc	ncngnnccc	nnnnnnnnn	nggnntnnn	tctncncgc	780
ccnncccc	ngnattaagg	cctcctctc	ccggccnc			818

<210> 28
 <211> 731
 <212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1) ... (731)

<223> n = A,T,C or G

<400> 28

aggaagggcg	gagggatatt	gtangggatt	gagggatagg	agnataangg	gggaggtgtg	60
tcccaacatg	anggtgnngt	tctcttttga	angaggggtg	ngtttttann	ccnggtgggt	120
gattnaaccc	cattgtatgg	agnnaaagg	tttnagggat	ttttcggctc	ttatcagtat	180
ntanattcct	gtnaatcgga	aaatnatntt	tcnncnggaa	aatnttgctc	ccatccgnaa	240
attnctcccg	ggtagtgcac	nttngggggn	cngccangtt	tcccaggctg	ctanaatcgt	300
actaaagntt	naagtgggan	tncaaataaa	aacctnnac	agagnatccn	tacccgactg	360
tnnnntnctt	tcgcccctng	actctgcng	agcccaatac	ccnngngnat	gtcncccngn	420
nnngcgnenc	tgaaannnnc	tcgnggctnn	gancatcang	gggttttcgca	tcaaaagcnn	480
cgtttcncat	naaggcactt	tngcctcatc	caaccnctng	ccctcnncca	tttngccgctc	540
nggttcncct	acgctnnntg	cncctnnntn	ganattttnc	cgcctngggg	naancctcct	600
gnaatgggta	gggncttntc	tttnaccnn	gnggtntact	aatcnnctnc	acgcntnctt	660
tctcnacccc	cccccttttt	caatcccanc	ggcnaatggg	gtctcccenn	cgangggggg	720
nnnccccann	c					731

<210> 29

<211> 822

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1) ... (822)

<223> n = A,T,C or G

<400> 29

actagtccag	tgtggtggaa	ttccattgtg	ttgggggncnc	ttctatgant	antnttagat	60
cgtctcanacc	tcacancctc	ccnacnangc	ctataangaa	nannaataga	nctgtncnnt	120
atntntacnc	tcatanncct	cnnnaccac	tccctcttaa	cccntactgt	gcctatngcn	180
tnnctantct	ntgccgectn	cnanccacn	gtgggcecnac	cncnngnat	ctcnatctcc	240
tcnccatntn	gcctananta	ngtncatacc	ctataacctac	nccaatgcta	nnnctaancn	300
tccatnantt	annntaacta	ccactgaent	ngactttcnc	atnanctcct	aatttgaatc	360
tactctgact	cccacngcct	annnattagc	ancntcccc	nacnatntct	caaccaaate	420
ntcaacaacc	tatctanctg	ttcnccaacc	nttncctccg	atccccnnac	aacccccctc	480
ccaaataccc	nccacctgac	ncctaaccn	caccatccc	gcaagccnan	ggncatttan	540
ccactggaat	cacnatngga	naaaaaaaaa	ccnaactctc	tancncnnat	ctccctaana	600
aatnctcctn	naatttactn	ncantnccat	caanccacn	tgaaacnnaa	cccctgtttt	660
tanatccctt	ctttcgaaaa	ccnacccttt	annncccaac	ctttngggcc	ccccnctnc	720
ccnaatgaag	gncncccaat	cnangaaacg	nccntgaaaa	ancnaggcna	anannntccg	780
canatcctat	cccttanttn	ggggncctt	nccnggggcc	cc		822

<210> 30

<211> 787

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1) ... (787)

<223> n = A,T,C or G

<400> 30

cggccgcctg	ctctggcaca	tgcctcctga	atggcatcaa	aagtgatgga	ctgcccattg	60
ctagagaaga	ccttctctcc	tactgtcatt	atggagccct	gcagactgag	ggctcccctt	120
gtctgcagga	tttgatgtct	gaagtcgtgg	agtgtggctt	ggagctcttc	atctacatna	180
gctggaagcc	ctggagggcc	tctctcgcca	gcctccccct	tctctccacg	ctctccangg	240
acaccagggg	ctccaggcag	cccattattc	ccagnangac	atgggtgttc	tccacgcgga	300
cccatggggc	ctgnaaggcc	agggctctct	ttgacaccat	ctctcccgtc	ctgcctggca	360
ggcctgtgga	tccactantt	ctanaacggn	cgccaccncg	gtgggagctc	cagcttttgt	420
tcccnttaat	gaagggttaat	tgcncgcttg	gcgtaatcat	nggtcanaac	tntttcctgt	480
gtgaaattgt	ttntcccctc	ncnattccnc	ncnacatacn	aacccggaan	cataaagtgt	540
taaagcctgg	gggtngcctn	nngaataaac	tnaactcaat	taattgcgtt	ggctcatggc	600
ccgctttccn	ttcnggaaaa	ctgtctntccc	ctgcnttnnt	gaatcggcca	ccccccnggg	660
aaaagcggtt	tgcnttttng	ggggntcctt	ccncttcccc	cctcnctaan	ccctnccgct	720
cggtcgttnc	nggtngcggg	gaangggnat	nnnctcccnc	naagggggng	agnnngntat	780
ccccaaa						787

<210> 31

<211> 799

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1) ... (799)

<223> n = A,T,C or G

<400> 31

tttttttttt	tttttttggc	gatgctactg	tttaattgca	ggaggtgggg	gtgtgtgtac	60
catgtaccag	ggctattaga	agcaagaagg	aaggagggag	ggcagagcgc	cctgctgagc	120
aacaaaggac	tcctgcagcc	ttctctgtct	gtctcttggc	gcaggcacat	ggggaggcct	180
cccgcagggt	gggggccacc	agtccagggg	tgggagcact	acanggggtg	ggagtgggtg	240
gtggctggtn	cnaatggcct	gncacanatc	cctacgattc	ttgacacctg	gatttcacca	300
ggggaccttc	tgttctccca	nggnaacttc	ntnnatctcn	aaagaacaca	actgtttctt	360
cngcanttct	ggctgttcat	ggaaagcaca	ggtgtccnat	ttnggctggg	acttggtaca	420
tatggttccg	ggccacctct	cccntcnaan	aagtaattca	cccccccccn	ccntctnttg	480
cctgggccct	taantaccca	caccggaact	canttantta	ttcatcttng	gntgggcttg	540
ntnatcnccn	cctgaangcg	ccaagttgaa	aggccacgcc	gtneccnctc	cccatagnan	600
ntttttncnt	canctaatgc	ccccccnggc	aacnatccaa	tcccccccn	tgggggcccc	660
agcccanggc	ccccgnctcg	ggnnnccngn	cncgnantcc	ccaggntctc	ccantcngnc	720
ccnnngcncc	cccgcacgca	gaacanaagg	ntngagccnc	cgcannnnnn	nggtnnncac	780
ctcgccccc	ccnncgnng					799

<210> 32

<211> 789

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1) ... (789)

<223> n = A,T,C or G

<400> 32

tttttttttt	tttttttttt	tttttttttt	tttttttttt	tttttttttt	tttttttttt	60
tttttncnag	ggcagggttta	ttgacaacct	cncgggacac	aancaggctg	gggacaggac	120
ggcaacaggc	tccggcggcg	gcggcggcg	ccctacctgc	ggtaccaa	ntgcagcctc	180
cgctcccgt	tgatnttcc	ctgcagctgc	aggatgcct	aaaacagggc	ctcggcctn	240
ggtgggcacc	ctgggatttn	aatttccacg	ggcacaatgc	ggtcgcanc	cctcaccacc	300
nattaggaat	agtggtnnta	cccncnccg	ttggcncact	cccctggaa	accacttntc	360
gcggctccgg	catctgggtc	taaaccttgc	aaacnctggg	gccctctttt	tggttantnt	420
nccngccaca	atcatnactc	agactggcnc	gggctggccc	caaaaaancn	ccccaaaacc	480
ggnccatgtc	ttnnccgggt	tgctgcnatn	tncatcacct	cccgggcnc	ncaggncac	540
ccaaaagttc	ttgngggccn	caaaaaanc	ccggggggnc	ccagtttcaa	caaagtcac	600
ccccttggcc	cccaaactcc	cccccgntt	nctgggtttg	ggaacccacg	cctctnnctt	660
tggnnggcaa	gntggntccc	ccttcggggc	cccgggtggg	ccnctctaa	ngaaaaacnc	720
ntcctnnnca	ccatccccc	nngnnacgnc	tancaangna	tccctttttt	tanaaacggg	780
ccccccnccg						789

<210> 33

<211> 793

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(793)

<223> n = A,T,C or G

<400> 33

gacagaacat	ggtggatggt	ggagcacctt	tctatacgac	ttacaggaca	gcagatgggg	60
aattcatggc	tggttgagca	atanaacccc	agttctacga	gctgctgac	aaaggacttg	120
gactaaagtc	tgatgaactt	cccaatcaga	tgagcatgga	tgattggcca	gaaatgaana	180
agaagtttgc	agatgtattt	gcaaagaaga	cgaaggcaga	gtggtgtcaa	atctttgacg	240
gcacagatgc	ctgtgtgact	ccggttctga	cttttgagga	ggttgttcat	catgatcaca	300
acaangaacg	gggctcggtt	atcaccantg	aggagcagga	cgtgagcccc	cgccctgcac	360
ctctgctggt	aaacaccccc	gccatccctt	ctttcaaaag	ggatccacta	cttctagagc	420
ggnccgccacc	gcgggtggagc	tccagctttt	gttcccttta	gtgagggtta	attgcgcgct	480
tggcgtaatc	atgggtcatan	ctgtttcctg	tgtgaaattg	ttatccgctc	acaattccac	540
acaacatacg	anccggaagc	atnaaaattt	aaagcctggn	ggtngcctaa	tgantgaact	600
nactcacatt	aattggcttt	gcgctcactg	cccgtttcc	agtccggaaa	acctgtcctt	660
gccagctgcc	nttaatgaat	cnggccaccc	cccggggaaa	aggcngtttg	cttnttgggg	720
cgcncttccc	gctttctcgc	ttcctgaant	ccttcccccc	ggtctttcgg	cttgcggcna	780
acggatcna	cct					793

<210> 34

<211> 756

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(756)

<223> n = A,T,C or G

<400> 34

gccgcgaccg	gcatgtacga	gcaactcaag	ggcgagtggg	accgtaaaag	ccccaatctt	60
ancaagtgcg	gggaanagct	gggtcgactc	aagctagttc	ttctggagct	caacttcttg	120

ccaaccacag	ggaccaagct	gaccaaacag	cagctaattc	tggcccgtga	catactggag	180
atcggggccc	aatggagcat	cctacgcaan	gacatcccc	ccttcgagcg	ctacatggcc	240
cagctcaa	gctactactt	tgattacaan	gagcagctcc	ccgagtcagc	ctatatgcac	300
cagctcttgg	gcctcaacct	cctcttcctg	ctgtcccaga	accgggtggc	tgantnccac	360
acgganttgg	ancggctgcc	tgcccaanga	catacanacc	aatgtctaca	tcnaccacca	420
gtgtcctgga	gcaatactga	tgganggcag	ctaccncaaa	gtnttcctgg	ccnagggtaa	480
catccccgc	cgagagctac	accttcttca	ttgacatcct	gctcgacact	atcagggatg	540
aaaatcgcn	ggttgctcca	gaaaggctnc	aanaanattc	ttttcnctga	aggcccccg	600
atncnctagt	nctagaatcg	gccccccatc	gcggtgganc	ctccaacctt	tcgttnccct	660
ttactgaggg	ttnattgccg	cccttggcgt	tatcatggtc	acncngttn	cctgtgttga	720
aattnttaac	ccccacaa	tccacgccna	catnng			756

<210> 35

<211> 834

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(834)

<223> n = A,T,C or G

<400> 35

ggggatctct	anatchacct	gnatgcatgg	ttgtcggtgt	ggtcgctgtc	gatgaanatg	60
aacaggatct	tgcccttgaa	gctctcggt	gctgtnttta	agttgctcag	tctgccgtca	120
tagtcagaca	cnctcttggg	caaaaaacan	caggatntga	gtcttgattt	cacctccaat	180
aatcttcngg	gctgtctgct	cggtgaactc	gatgacnang	ggcagctggg	tgtgtntgat	240
aaantccanc	angttctcct	tggtgacctc	cccttcaaa	ttgttcgggc	cttcatcaaa	300
cttctnnaan	angannancc	cantttgtc	gagctggnat	ttgganaaca	cgtcaccgtt	360
ggaaactgat	cccaaagtgt	atgtcatcca	tcgcctctgc	tgcttgcaaa	aaacttgctt	420
ggcncaaate	cgactcccn	tccttgaaag	aagccnatca	cacccccctc	cctggactcc	480
nncaangact	ctnccgctnc	ccntccnng	cagggttggt	ggcannccgg	gccntgcgc	540
ttcttcagcc	agttcacnat	nttcacagc	ccctctgcca	gctgtnttat	tccttggggg	600
ggaanccgtc	tctcccttcc	tgaannaact	ttgaccgtng	gaatagccgc	gcntcnccnt	660
acntnctggg	ccgggttcaa	antccctccn	ttgncntcn	cctcgggccca	ttctggattt	720
nccnaacttt	ttccttcccc	cncctccnng	ngtttggnnt	tttcatnggg	ccccaaactc	780
gctnttggcc	antcccttgg	gggcntntan	cncctccnt	ggtcctntng	ggcc	834

<210> 36

<211> 814

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(814)

<223> n = A,T,C or G

<400> 36

cggnccgttt	ccngccgcgc	cccgtttcca	tgacnaagge	tccttccang	ttaaatacn	60
cctagnaaac	attaatgggt	tgctctacta	atacatcata	cnaaccagta	agcctgcccc	120
naacgccaac	tcaggccatt	cctaccaaag	gaagaaagge	tggtctctcc	accccttgta	180
ggaaaggcct	gccttgtaag	acaccacaat	ncggctgaat	ctnaagtctt	gtgttttact	240
aatggaaaaa	aaaaataaac	aanagggttt	gttctcatgg	ctgccaccgc	cagcctggca	300
ctaaaacanc	ccagcgctca	cttctgcttg	ganaaatatt	ctttgctctt	ttggacatca	360

ggcttgatgg	tatcactgcc	acntttccac	ccagctgggc	ncccttcccc	catntttgtc	420
antganctgg	aaggcctgaa	ncttagtctc	caaaagtctc	ngcccacaag	accggccacc	480
aggggagtc	ntttncagtg	gatctgccaa	anantaccn	tatcatcnnt	gaataaaaag	540
gcccctgaac	ganatgcttc	cancancctt	taagacccat	aatcctngaa	ccatgggtgcc	600
cttccgggtct	gatccnaaag	gaatgttcc	gggtcccant	ccctcctttg	ttntttacgt	660
tgtnttggac	ccntgctngn	atnaccnaan	tganatcccc	ngaagcaccc	tnccctggc	720
atgtganttt	cntaaattct	ctgccctacn	nctgaaagca	cnattccctn	ggcnccnaan	780
ggngaactca	agaagggtctn	ngaaaaacca	cncn			814

<210> 37

<211> 760

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(760)

<223> n = A,T,C or G

<400> 37

gcatgctgct	cttcctcaaa	gttggttcttg	ttgccataac	aaccaccata	ggtaaagcgg	60
gcgcagtgtt	cgctgaagg	gttgtagtac	cagcgcgga	tgctctcctt	gcagagtcct	120
gtgtctggca	gggccacgca	atgccctttg	tactgggga	aatggatgcg	ctggagctcg	180
tcnaanccac	tcgtgtattt	ttcacangca	gcctcctccg	aagcntccgg	gcagtgggg	240
gtgtcgtcac	actccactaa	actgtcgatn	cancagccca	ttgctgcagc	ggaactgggt	300
gggctgacag	gtgccagaac	acactggatn	ggcctttcca	tggaaagggc	tgggggaaat	360
cncctnancc	caaactgcct	ctcaaaggcc	accttgccca	ccccgacagg	ctagaaatgc	420
actcttcttc	ccaaaggtag	ttgttcttgt	tgcccaagca	ncctccanca	aacccaaaanc	480
ttgcaaaatc	tgctccgtgg	gggtcatnnn	taccanggtt	ggggaaanaa	acccggcngn	540
ganccncctt	gtttgaatgc	naaggnaata	atcctcctgt	cttgcttggg	tggaaanagca	600
caattgaact	gttaacnttg	ggccnggttc	cncnnggtg	gtctgaaact	aatcaccgtc	660
actggaaaaa	ggtangtgcc	ttccttgaat	tcccaaannt	cccctngntt	tgggtntttt	720
ctcctctncc	ctaaaaatcg	tnttcccccc	centanggcg			760

<210> 38

<211> 724

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(724)

<223> n = A,T,C or G

<400> 38

tttttttttt	tttttttttt	tttttttttt	tttttaaaaa	ccccctccat	tgaatgaaaa	60
cttccnaaat	tgtccaaccc	cctcnnccaa	atnnccattt	cggggggggg	gttccaaacc	120
caaattaatt	ttgganttta	aattaaatnt	tnattngggg	aanaanccaa	atgtnaagaa	180
aatttaaccc	attatnaact	taaatnccn	gaaaccntg	gnttccaaaa	atttttaacc	240
cttaaatccc	tccgaaattg	ntaanggaaa	accaaattcn	cctaaggctn	tttgaaggtt	300
ngatttaaac	ccccttnant	tnntttnacc	cnnngnctnaa	ntatttngnt	tccggtgttt	360
tcctnttaan	cntnggtaac	tcccngtaat	gaannnccct	aanccaatta	aaccgaattt	420
tttttgaatt	ggaaattccn	ngggaattna	cgggggtttt	tccnttttgg	gggccatncc	480
ccncttttcg	gggtttgggn	ntaggttgaa	tttttnnang	ncccaaaaaa	ncccccaana	540
aaaaaactcc	caagnnttaa	ttngaattnc	ccccttccca	ggccttttgg	gaaaggnggg	600

```

tttntggggg ccngggantt cnttcccccn ttncncccc ccccccnggt aaanggttat    660
ngnnttttgg ttttggggccc cttnanggac cttccggatn gaaattaaat ccccggnncg    720
gccg                                724

```

```

<210> 39
<211> 751
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> (1)...(751)
<223> n = A,T,C or G

```

```

<400> 39
tttttttttt tttttctttg ctcacattta atttttatatt tgattttttt taatgctgca    60
caacacaata tttatttcat ttgtttcttt tatttcattt tatttgtttg ctgctgctgt    120
tttatttatt tttactgaaa gtgagagggg acttttggtg ccttttttcc tttttctgta    180
ggccgcctta agcttttctaa atttggaaca tctaagcaag ctgaanggaa aaggggggtt    240
cgcaaaatca ctcgggggaa nggaaagggt gctttgttaa tcatgcccta tgggtgggtga    300
ttaactgctt gtacaattac ntttcacttt taattaattg tgctnaangc ttttaattana    360
cttgggggtt ccctccccc accaaccnccn ctgacaaaaa gtgccngccc tcaaatnatg    420
tcccggcnnt cnttgaaaca cacngcngaa ngttctcatt ntccccncnc caggtnaaaa    480
tgaagggtta ccatntttta cncacacctc acntggcnnn gcctgaatcc tcnaaaancn    540
ccctcaancn aattnctnng ccccggtcnc gcntnngtc cccccgggt ccgggaantn    600
cacccccnga annnntnnc naacnaaatt ccgaaaatat tcccnntcnc tcaattcccc    660
cnnagactnt cctcnnncn cncaattttc ttttnttcac gaacncgnnc cnaaaatgn    720
nnnnncctc cncnngtcn naatcnccan c                                751

```

```

<210> 40
<211> 753
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> (1)...(753)
<223> n = A,T,C or G

```

```

<400> 40
gtgggtatatt ctgtaagatc aggtgttcct ccctcgtagg tttagaggaa acaccctcat    60
agatgaaaac ccccccgaga cagcagcact gcaactgcca agcagccggg gtaggagggg    120
cgccctatgc acagctgggc ccttgagaca gcagggttc gatgtcaggc tcgatgtcaa    180
tgggtctggaa gcggcggtg tacctgcgta ggggcacacc gtcagggcc accaggaact    240
tctcaaagtt ccaggcaacn tcgttgcgac acaccggaga ccagggtgatn agcttgggggt    300
cggtcataa cgcgggtggcg tcgtcgctgg gagctggcag ggcctcccgc aggaaggcna    360
ataaaagggt cgcccccgca ccgttcant cgcacttctc naanaccatg angttggggt    420
cnaaccacc accannccgg acttccttga nggaattccc aaatctcttc gntcttgggc    480
ttctnctgat gccctanctg gttgcccngn atgccaanca nccccaancc ccgggggtcct    540
aaanaccncc cctcctntt tcatctgggt tntntcccc ggaccntggt tctctcaag    600
ggancccata tctcnaccan tactcaccnt nccccccnt gnnaccanc cttctanngn    660
tccccnccg ncctctggcc cntcaaanan gcttnacna cctgggtctg ccttcccccc    720
tncctatct gnaccnccn tttgtctcan tnt                                753

```

```

<210> 41

```

<211> 341
 <212> DNA
 <213> Homo sapien

<400> 41
 actatatcca tcacaacaga catgcttcat cccatagact tcttgacata gcttcaaagt 60
 agtgaaccca tccttgattt atatacatat atgttctcag tattttggga gcctttccac 120
 ttctttaaac cttgttcatt atgaacactg aaaataggaa tttgtgaaga gttaaaaagt 180
 tatagcttgt ttacgtagta agtttttgaa gtctacattc aatccagaca cttagttgag 240
 tgttaaactg tgatttttaa aaaatatcat ttgagaatat tctttcagag gtattttcat 300
 ttttactttt tgattaattg tgttttatat attagggtag t 341

<210> 42
 <211> 101
 <212> DNA
 <213> Homo sapien

<400> 42
 acttactgaa ttttagttctg tgctcttctt tatttagtgt tgtatcataa atactttgat 60
 gtttcaaaca ttctaaataa ataattttca gtggcttcat a 101

<210> 43
 <211> 305
 <212> DNA
 <213> Homo sapien

<400> 43
 acatctttgt tacagtctaa gatgtgttct taaatcacca ttccttctctg gtcttcaccc 60
 tccagggtgg tctcacactg taattagagc tattgaggag tctttacagc aaattaagat 120
 tcagatgcct tgctaagtct agagttctag agttatgttt cagaaagtct aagaaaccca 180
 cctcttgaga ggtcagtaaa gaggacttaa tatttcatat ctacaaaatg accacaggat 240
 tggatacaga acgagagtta tcttgataa ctcagagctg agtacctgcc cgggggcccgc 300
 tcgaa 305

<210> 44
 <211> 852
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1) ... (852)
 <223> n = A,T,C or G

<400> 44
 acataaatat cagagaaaag tagtctttga aatatttacg tccaggagt ttttgtttct 60
 gattatttgg tgtgtgtttt ggtttgtgtc caaagtattg gcagcttcag ttttcatttt 120
 ctctccatcc tcgggcattc ttcccaaatt tatataccag tcttcgtcca tccacacgct 180
 ccagaatttc tctttttag taatatctca tagctcggct gagcttttca taggtcatgc 240
 tgctgttgtt cttcttttta ccccatagct gagccactgc ctctgatttc aagaacctga 300
 agacgccctc agatcgggtc tcccatttta ttaatcctgg gttcttgtct gggttcaaga 360
 ggatgtcgcg gatgaattcc cataagttag tccctctcgg gttgtgcttt ttgggtgtggc 420
 acttggcagg ggggtcttgc tcttttttca tatcagggtga ctctgcaaca ggaagggtgac 480
 tgggtggtgt catggagatc tgagcccggc agaaagtttt gctgtccaac aaatctactg 540
 tgctaccata gttggtgtca tataaatagt tctngtcttt ccagggtgtc atgatggaag 600

gctcagtttg	ttcagtccttg	acaatgacat	tgtgtgtgga	ctggaacagg	tcactactgc	660
actggccggt	ccacttcaga	tgctgcaagt	tgctgtagag	gagntgcccc	gccgtccctg	720
ccgcccgggt	gaactcctgc	aaactcatgc	tgcaaagggtg	ctcgccgttg	atgtcgaact	780
cntggaaaagg	gatacaattg	gcattccagct	ggttggtgtc	caggaggtga	tggagccact	840
cccacacctg	gt					852

<210> 45

<211> 234

<212> DNA

<213> Homo sapien

<400> 45

acaacagacc	cttgctcgct	aacgacctca	tgctcatcaa	gttggacgaa	tccgtgtccg	60
agtctgacac	catccggagc	atcagcattg	cttcgcagtg	ccctaccgcg	gggaactctt	120
gcctcgtttc	tggctgggggt	ctgctggcga	acggcagaat	gcctaccgtg	ctgcagtgcg	180
tgaacgtgtc	ggtggtgtct	gaggaggtct	gcagtaagct	ctatgacccg	ctgt	234

<210> 46

<211> 590

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1) ... (590)

<223> n = A,T,C or G

<400> 46

actttttatt	taaatgttta	taaggcagat	ctatgagaat	gatagaaaac	atggtgtgta	60
atttgatagc	aattttttgg	agattacaga	gttttagtaa	ttaccaatta	cacagttaaa	120
aagaagataa	tatattccaa	gcanatacaa	aatatcta	gaaagatcaa	ggcaggaaaa	180
tgantataac	taattgacaa	tggaaaatca	attttaatgt	gaattgcaca	ttatccttta	240
aaagctttca	aaanaaanaa	ttattgcagt	ctanttaatt	caaacagtgt	taaatggtat	300
caggataaan	aactgaagg	canaaagaat	taattttcac	ttcatgtaac	ncacccanat	360
ttacaatggc	ttaaatgcan	ggaaaaagca	gtggaagtag	ggaagtantc	aaggtctttc	420
tggctctctaa	tctgccttac	tctttgggtg	tggctttgat	cctctggaga	cagctgccag	480
ggctcctggt	atatccacaa	tcccagcagc	aagatgaagg	gatgaaaaag	gacacatgct	540
gccttccttt	gaggagactt	catctcactg	gccaacactc	agtcacatgt		590

<210> 47

<211> 774

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1) ... (774)

<223> n = A,T,C or G

<400> 47

acaagggggc	ataatgaagg	agtggggana	gatttttaaag	aaggaaaaaa	aacgaggccc	60
tgaacagaat	tttctgnac	aacggggctt	caaaataatt	ttcttgggga	ggttcaagac	120
gcttactgc	ttgaaactta	aatggatgtg	ggacanaatt	ttctgtaatg	accctgaggg	180
cattacagac	gggactctgg	gaggaaggat	aaacagaaaag	gggacaaaag	ctaataccaa	240
aacatcaaag	aaaggaaggt	ggcgtcatac	ctcccagcct	acacagttct	ccagggtctct	300

```

cctcatccct ggaggacgac agtggaggaa caactgacca tgtccccagg ctctgtgtg      360
ctggctcctg gtcttcagcc cccagctctg gaagcccacc ctctgctgat cctgcgtggc      420
ccacactcct tgaacacaca tccccaggtt atattcctgg acatggctga acctcctatt      480
cctacttccg agatgccttg ctccctgcag cctgtcaaaa tcccactcac cctccaaacc      540
acggcatggg aagcctttct gacttgcttg attactccag catcttggaa caatccctga      600
ttccccactc cttagaggca agataggggtg gttaagagta gggctggacc acttggagcc      660
aggctgctgg cttcaaattn tggctcattt acgagctatg ggaccttggg caagtnatct      720
tcacttctat gggcntcatt ttgttctacc tgcaaaatgg gggataataa tagt          774

```

<210> 48

<211> 124

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(124)

<223> n = A,T,C or G

<400> 48

```

canaaattga aattttataa aaaggcattt ttctcttata tccataaaat gatataattt      60
ttgcaantat anaaatgtgt cataaattat aatgttcctt aattacagct caacgcaact      120
tggt                                              124

```

<210> 49

<211> 147

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(147)

<223> n = A,T,C or G

<400> 49

```

gccgatgcta ctattttatt gcaggagggtg ggggtgtttt tattattctc tcaacagctt      60
tgtggctaca ggtgggtgtct gactgcatna aaaanttttt tacgggtgat tgcaaaaatt      120
ttagggcacc catatcccaa gcantgt                      147

```

<210> 50

<211> 107

<212> DNA

<213> Homo sapien

<400> 50

```

acattaaatt aataaaagga ctgttgggggt tctgctaaaa cacatggctt gatatatattgc      60
atggtttgag gttaggagga gttaggcata tgttttggga gaggggt                      107

```

<210> 51

<211> 204

<212> DNA

<213> Homo sapien

<400> 51

```

gtcctaggaa gtctagggga cacacgactc tggggtcacg gggccgacac acttgcacgg      60

```

cggggaaggaa aggcagagaa gtgacaccgt caggggggaaa tgacagaaag gaaaatcaag	120
gccttgcaag gtcagaaagg ggactcaggg cttccaccac agccctgccc cacttggcca	180
cctccctttt gggaccagca atgt	204

<210> 52
 <211> 491
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(491)
 <223> n = A,T,C or G

<400> 52	
acaaagataa catttatctt ataacaaaaa tttgatagtt ttaaagggtta gtattgtgta	60
gggtattttt caaaagacta aagagataac tcaggtaaaa agttagaaat gtataaaaca	120
ccatcagaca gggtttttaa aaacaacata ttacaaaatt agacaatcat ccttaaaaaa	180
aaaacttctt gtatcaattt cttttgttca aaatgactga cttaantatt tttaaatatt	240
tcanaaacac ttcctcaaaa attttcaana tggtagcttt canatgtnc ctcagtccca	300
atgttgctca gataaataaa tctcgtgaga acttaccacc caccacaagc tttctggggc	360
atgcaacagt gtcttttctt tnccttttct tttttttttt ttacaggcac agaaactcat	420
caattttatt tggataacaa agggctcca aattatattg aaaaataaat ccaagttaat	480
atcactcttg t	491

<210> 53
 <211> 484
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(484)
 <223> n = A,T,C or G

<400> 53	
acataattta gcagggctaa ttaccataag atgctattta ttaanaggtn tatgatctga	60
gtattaacag ttgctgaagt ttggtatttt tatgcagcat tttctttttg ctttgataac	120
actacagaac ccttaaggac actgaaaatt agtaagtaaa gttcagaaac attagctgct	180
caatcaaate tctacataac actatagtaa ttaaaacgtt aaaaaaaagt gttgaaatct	240
gcactagtat anaccgctcc tgtcaggata anactgcttt ggaacagaaa gggaaaaanc	300
agctttgant ttctttgtgc tgatangagg aaaggctgaa ttaccttgtt gcctctccct	360
aatgattggc aggtcnggta aatnccaaaa catattccaa ctcaacactt cttttccncg	420
tancttgant ctgtgtattc caggancagg cggatggaat gggccagccc ncggatgttc	480
cant	484

<210> 54
 <211> 151
 <212> DNA
 <213> Homo sapien

<400> 54	
actaaacctc gtgcttgtga actccataca gaaaacgggtg ccatccctga acacggctgg	60
ccactgggta tactgtgtac aaccgcaaca acaaaaacac aaatccttgg cactggctag	120
tctatgtcct ctcaagtgcc tttttgtttg t	151

<210> 55
 <211> 91
 <212> DNA
 <213> Homo sapien

<400> 55
 acctggccttg tctccgggtg gttcccggtg cccccacgg tccccagaac ggacactttc 60
 gccctccagt ggatactga gccaaagtgg t 91

<210> 56
 <211> 133
 <212> DNA
 <213> Homo sapien

<400> 56
 ggcggatgtg cggttggtat atacaaatat gtcattttat gtaagggact tgagtatact 60
 tggatttttg gtatctgtgg gttgggggga cgggccagga accaataccc catggatacc 120
 aagggacaac tgt 133

<210> 57
 <211> 147
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(147)
 <223> n = A,T,C or G

<400> 57
 actctggaga acctgagccg ctgctccgcc tctgggatga ggtgatgcan gcngtggcgc 60
 gactgggagc tgagcccttc cctttgcgcc tgcctcagag gattgttgcc gacntgcana 120
 tctcantggg ctggatncat gcagggt 147

<210> 58
 <211> 198
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(198)
 <223> n = A,T,C or G

<400> 58
 acagggatat aggtttnaag ttattgtnat tgtaaaatac attgaatttt ctgtatactc 60
 tgattacata catttatcct ttaaaaaaga tgtaaatctt aatttttatg ccattctatta 120
 atttaccat gagttacctt gtaaatgaga agtcatgata gcactgaatt ttaactagtt 180
 ttgacttcta agtttggt 198

<210> 59
 <211> 330
 <212> DNA
 <213> Homo sapien

<400> 59

acaacaaatg ggttgtgagg aagtcttatc agcaaaactg gtgatggcta ctgaaaagat	60
ccattgaaaa ttatcattaa tgattttaaa tgacaagtta tcaaaaactc actcaatttt	120
cacctgtgct agcttgctaa aatgggagtt aactctagag caaatatagt atctttctgaa	180
tacagtcaat aaatgacaaa gccagggcct acaggtgggt tccagacttt ccagacccag	240
cagaaggaat ctattttatc acatggatct ccgtctgtgc tcaaaatacc taatgatatt	300
tttcgtcttt attggacttc tttgaagagt	330

<210> 60

<211> 175

<212> DNA

<213> Homo sapien

<400> 60

accgtgggtg ccttctacat tcctgacggc tccttcacca acatctgggt ctacttcggc	60
gtcgtgggct ccttcctctt catcctcacc cagctgggtg tgctcatcga ctttgccgac	120
tcctggaacc agcgggtggc gggcaaggcc gaggagtgcg attcccgtgc ctggt	175

<210> 61

<211> 154

<212> DNA

<213> Homo sapien

<400> 61

accccacttt tcctcctgtg agcagtctgg acttctcact gctacatgat gagggtgagt	60
ggttggttgc cttcaacagt atcctccctt ttccggatct gctgagccgg acagcagtgc	120
tggactgcac agccccgggg ctccacattg ctgt	154

<210> 62

<211> 30

<212> DNA

<213> Homo sapien

<400> 62

cgctcgagcc ctatagttag tcgtattaga	30
----------------------------------	----

<210> 63

<211> 89

<212> DNA

<213> Homo sapien

<400> 63

acaagtcatt tcagcaccct ttgctcttca aaactgacca tctttttatat ttaatgcttc	60
ctgtatgaat aaaaatgggt atgtcaagt	89

<210> 64

<211> 97

<212> DNA

<213> Homo sapien

<400> 64

accggagtaa ctgagtcggg acgctgaatc tgaatccacc aataaataaa gggtctgcag	60
aatcagtgc tccaggattg gtccttggat ctggggg	97

<210> 65
 <211> 377
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1) ... (377)
 <223> n = A,T,C or G

<400> 65
 acaacaanaa ntcccttctt taggccactg atggaaacct ggaaccccct tttgatggca 60
 gcatggcgct ctaggccttg acacagcggc tgggggtttg gctntcccaa accgcacacc 120
 ccaaccctgg tctaccaca nttctggcta tgggctgtct ctgccactga acatcagggg 180
 tcggtcataa natgaaatcc caanggggac agagggtcagt agaggaagct caatgagaaa 240
 ggtgctgttt gctcagccag aaaacagctg cctggcattc gccgctgaac tatgaaccgg 300
 tgggggtgaa ctaccccan gaggaatcat gcttgggcga tgcaanggtg ccaacaggag 360
 gggcgggagg agcatgt 377

<210> 66
 <211> 305
 <212> DNA
 <213> Homo sapien

<400> 66
 acgcctttcc ctcagaattc agggaagaga ctgtgcctg ccttcctccg ttgttgctg 60
 agaaccctg tgcccttcc caccatatcc accctcgctc catctttgaa ctcaaacacg 120
 aggaactaac tgcaccctgg tctctcccc agtccccagt tcaccctcca tccctcacct 180
 tctccactc taagggatat caacactgcc cagcacaggg gccctgaatt tatgtggtt 240
 ttatatattt ttaataaga tgcactttat gtcatttttt aataaagtct gaagaattac 300
 tggtt 305

<210> 67
 <211> 385
 <212> DNA
 <213> Homo sapien

<400> 67
 actacacaca ctccacttgc ccttgtgaga cactttgtcc cagcacttta ggaatgctga 60
 ggtcggacca gccacatctc atgtgcaaga ttgcccagca gacatcaggt ctgagagttc 120
 cccttttaaa aaaggggact tgcttaaaaa agaagtctag ccacgattgt gtagagcagc 180
 tgtgctgtgc tggagattca cttttgagag agttctcctc tgagacctga tctttagagg 240
 ctgggcagtc ttgcacatga gatggggctg gtctgatctc agcactcctt agtctgcttg 300
 cctctcccag ggccccagcc tggccacacc tgcttacagg gcactctcag atgccatac 360
 catagtttct gtgctagtgg accgt 385

<210> 68
 <211> 73
 <212> DNA
 <213> Homo sapien

<400> 68
 acttaaccag atatattttt accccagatg gggatattct ttgtaaaaaa tgaaaataaa 60
 gtttttttaa tgg 73

<210> 69
 <211> 536
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(536)
 <223> n = A,T,C or G

<400> 69
 actagtccag tgtggtggaa ttccattgtg ttgggggctc tcaccctcct ctctctgcagc 60
 tccagctttg tgctctgcct ctgaggagac catggcccag catctgagta ccctgctgct 120
 cctgctggcc accctagctg tggccctggc ctggagcccc aaggaggagg ataggataat 180
 cccgggtggc atctataacg cagacctcaa tgatgagtgg gtacagcgtg cccttcactt 240
 cgccatcagc gagtataaca aggccaccaa agatgactac tacagacgtc cgctgcgggt 300
 actaagagcc aggcaacaga ccgttggggg ggtgaattac ttcttcgacg tagagggtggg 360
 ccgaaccata tgtaccaagt cccagcccaa cttggacacc tgtgccttcc atgaacagcc 420
 agaactgcag aagaaacagt tgtgctcttt cgagatctac gaagtccct ggggagaaca 480
 gaangtcctt gggtgaaatc caggtgtcaa gaaatcctan ggatctgttg ccaggc 536

<210> 70
 <211> 477
 <212> DNA
 <213> Homo sapien

<400> 70
 atgacccta acagggggccc tctcagccct cctaatagacc tccggcctag ccattgtgatt 60
 tcacttccac tccataacgc tctcactact aggccacta accaacacac taaccatata 120
 ccaatgatgg cgcgatgtaa cagagaaaag cacataccaa ggccaccaca caccacctgt 180
 ccaaaaaggc cttcgatacg ggataatcct atttattacc tcagaagttt ttttcttcgc 240
 agggattttt ctgagccttt taccactcca gcctagcccc taccctccaa ctaggagggc 300
 actggcccc aacaggcatc accccgctaa atcccctaga agtcccactc ctaaacacat 360
 ccgtattact cgcatacagga gtatcaatca cctgagctca ccatagtcta atagaaaaca 420
 accgaaacca aattattcaa agcactgctt attacaattt tactgggtct ctatttt 477

<210> 71
 <211> 533
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(533)
 <223> n = A,T,C or G

<400> 71
 agagctatag gtacagtgtg atctcagctt tgcaaacaca ttttctacat agatagtact 60
 aggtattaat agatatgtaa agaaagaaat cacaccatta ataatggtaa gattgggtta 120
 tgtgatttta gtggtatttt tggcaccctt atatatgttt tccaaacttt cagcagtgat 180
 attatttcca taacttaaaa agtgagtgtt aaaaagaaaa tctccagcaa gcatctcatt 240
 taaataaagg tttgtcatct ttaaaaatac agcaatatgt gactttttta aaaagctgtc 300
 aaatagggtg gaccctacta ataattatta gaaatacatt taaaaacatc gagtacctca 360
 agtcagtgtt ccttgaaaaa tatcaaatat aactcttaga gaaatgtaca taaaagaatg 420
 cttcgtaatt ttggagtang aggttccttc ctcaattttg tattttttaa aagtacatgg 480
 taaaaaaaaa aattcacaac agtatataag gctgtaaaat gaagaattct gcc 533

<210> 72
 <211> 511
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(511)
 <223> n = A,T,C or G

<400> 72
 tattacggaa aaacacacca cataattcaa ctancaaaga anactgcttc agggcggtgta 60
 aaatgaaagg cttccaggca gttatctgat taaagaacac taaaagaggg acaaggctaa 120
 aagccgcagg atgtctacac tatancaggc gctatttggg ttggctggag gagctgtgga 180
 aaacatggan agattggtgc tgganatcgc cgtggctatt cctcattgtt attacanagt 240
 gaggttctct gtgtgcccac tggtttgaaa accgttctnc aataatgata gaatagtaca 300
 cacatgagaa ctgaaatggc ccaaaccag aaagaaagcc caactagatc ctcagaanac 360
 gcttctaggg acaataaccg atgaagaaaa gatggcctcc ttgtgcccc gtctgttatg 420
 atttctctcc attgcagcna naaaccggtt cttctaagca aacncagggtg atgatggcna 480
 aaatacaccc cctcttgaag naccnggagg a 511

<210> 73
 <211> 499
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(499)
 <223> n = A,T,C or G

<400> 73
 cagtgccagc actggtgcc a gtaccagtag caataacagt gccagtgcc gtgccagcac 60
 cagtgggtggc ttcagtgtg gtgccagcct gaccgccact ctcacatttg ggctcttcgc 120
 tggccttggg ggagctggg ccagcaccag tggcagctct ggtgcctgtg gtttctccta 180
 caagtgaagt tttagatatt gttaatcctg ccagtctttc tcttcaagcc aggggtgcac 240
 ctcagaaacc tactcaacac agcactctag gcagccacta tcaatcaatt gaagttgaca 300
 ctctgcatta aatctatttg ccatttctga aaaaaaaaaa aaaaaaaggg cggccgctcg 360
 antctagagg gcccggttaa acccgctgat cagcctcgac tgtgccttct anttgccagc 420
 catctgttgt ttgcccctcc cccgntgcct tccttgacct tggaaagtgc cactccact 480
 gtcctttcct aantaaat 499

<210> 74
 <211> 537
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(537)
 <223> n = A,T,C or G

<400> 74
 tttcatagga gaacacactg aggagatact tgaagaattt ggattcagcc gcgaagagat 60

ttatcagctt	aactcagata	aaatcattga	aagtaataag	gtaaaagcta	gtctctaact	120
tccaggccca	cggctcaagt	gaatttgaat	actgcattta	cagtgtagag	taacacataa	180
cattgtatgc	atggaaacat	ggaggaacag	tattacagtg	tcctaccact	ctaatacaaga	240
aaagaattac	agactctgat	tctacagtga	tgattgaatt	ctaaaaatgg	taatcattag	300
ggcttttgat	ttataanact	ttgggtactt	atactaaatt	atggtagtta	tactgccttc	360
cagtttgctt	gatatatttg	ttgatattaa	gattccttgac	ttatatatttg	aatgggttct	420
actgaaaaan	gaatgatata	ttcttgaaga	catcgatata	catttattta	cactccttgat	480
tctacaatgt	agaaaatgaa	ggaaatgccc	caaattgtat	ggtgataaaa	gtcccg	537

<210> 75
 <211> 467
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1) ... (467)
 <223> n = A,T,C or G

<400> 75						
caaanacaat	tgttcaaaag	atgcaaata	tacactactg	ctgcagctca	caaacacctc	60
tgcatattac	acgtacctcc	tccgtctcct	caagtagtgt	ggtctatatt	gccatcatca	120
cctgctgtct	gcttagaaga	acggctttct	gctgcaangg	agagaaatca	taacagacgg	180
tggcacaagg	aggccatctt	ttcctcatcg	gttattgtcc	ctagaagcgt	cttctgagga	240
tctagttggg	ctttctttct	gggtttgggc	catttcantt	ctcatgtgtg	tactattcta	300
tcattattgt	ataacggttt	tcaaaccngt	gggacncag	agaacctcac	tctgtaataa	360
caatgaggaa	tagccacggt	gatctccagc	accaaactct	tccatgttnt	tccagagctc	420
ctccagccaa	cccaaatagc	cgctgctatn	gtgtagaaca	tccctgn		467

<210> 76
 <211> 400
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1) ... (400)
 <223> n = A,T,C or G

<400> 76						
aagctgacag	cattcgggcc	gagatgtctc	gctccgtggc	cttagctgtg	ctcgcgctac	60
tctctctttc	tggcctggag	gctatccagc	gtactccaaa	gattcaggtt	tactcaegtc	120
atccagcaga	gaatggaaa	tcaaatttcc	tgaattgcta	tgtgtctggg	tttcatccat	180
ccgacattga	agttgactta	ctgaagaatg	gagagagaat	tgaaaaagtg	gagcattcag	240
acttgtcttt	cagcaaggac	tggtctttct	atctcttgta	ctacactgaa	ttcaccccca	300
ctgaaaaaga	tgagtatgcc	tgccgtgtga	accatgtgac	tttgtcacag	cccaagatng	360
ttnagtggga	tcganacatg	taagcagcan	catgggaggt			400

<210> 77
 <211> 248
 <212> DNA
 <213> Homo sapien

<400> 77						
ctggagtgcc	ttggtgtttc	aagcccctgc	aggaagcaga	atgcaccttc	tgaggcacct	60

ccagctgccc	cggcggggga	tgcgaggctc	ggagcaccct	tgcccggctg	tgattgctgc	120
caggcactgt	tcattctcagc	ttttctgtcc	ctttgtctcc	ggcaagcgct	tctgctgaaa	180
gttcatatct	ggagcctgat	gtcttaacga	ataaaggctc	catgctccac	ccgaaaaaaaa	240
aaaaaaaa						248

<210> 78

<211> 201

<212> DNA

<213> Homo sapien

<400> 78

actagtccag	tgtggtggaa	ttccattgtg	ttgggcccga	cacaatggct	acctttaaca	60
tcacccagac	cccgcctgc	ccgtgcccga	cgctgctgct	aacgacagta	tgatgcttac	120
tctgctactc	ggaaactatt	tttatgtaat	taatgtatgc	tttcttggtt	ataaatgcct	180
gatttaaaaa	aaaaaaaaaa	a				201

<210> 79

<211> 552

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(552)

<223> n = A,T,C or G

<400> 79

tccttttgtt	aggtttttga	gacaacccta	gacctaaact	gtgtcacaga	cttctgaatg	60
tttaggcagt	gctagtaatt	tcctcgtaat	gattctgtta	ttactttcct	attctttatt	120
cctctttcct	ctgaagatta	atgaagtga	aaattgaggt	ggataaatac	aaaaaggtag	180
tgtgatagta	taagtatcta	agtgcagatg	aaagtgtggt	atatatatcc	attcaaaatt	240
atgcaagtta	gtaattactc	agggttaact	aaattacttt	aatatgctgt	tgaacctact	300
ctgttccttg	gctagaaaaa	attataaaca	ggactttggt	agtttgggaa	gccaaattga	360
taatatctta	tgttctaaaa	gttgggctat	acataaanta	tnaagaaata	tggaatttta	420
ttcccaggaa	tatgggggttc	atttatgaat	antaccggg	anagaagttt	tgantnaaac	480
cngttttggt	taatacgtta	atatgtcctn	aatnaacaag	gcntgactta	tttccaaaaa	540
aaaaaaaaaa	aa					552

<210> 80

<211> 476

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(476)

<223> n = A,T,C or G

<400> 80

acagggattt	gagatgctaa	ggccccagag	atcgtttgat	ccaaccctct	tattttcaga	60
ggggaaaatg	gggcctagaa	gttacagagc	atctagctgg	tgcgctggca	cccctggcct	120
cacacagact	cccagtagc	tgggactaca	ggcacacagt	cactgaagca	ggccctgttt	180
gcaattcaog	ttgccacctc	caacttaaac	attcttcata	tgtgatgtcc	ttagtcacta	240
aggttaaact	ttcccaccca	gaaaaggcaa	cttagataaa	atcttagagt	actttcatac	300
tcttctaagt	cctcttccag	cctcactttg	agtcctcctt	gggggttgat	aggaantntc	360

```
tcttggtttt ctcaataaaa tctctatcca tctcatgttt aatttggtac gcntaaaaat 420
gctgaaaaaa ttaaaatgtt ctggtttcnc tttaaaaaaa aaaaaaaaaa aaaaaa 476
```

```
<210> 81
<211> 232
<212> DNA
<213> Homo sapien
```

```
<220>
<221> misc_feature
<222> (1)...(232)
<223> n = A,T,C or G
```

```
<400> 81
tttttttttg tatgcntcn ctgtgnggtt attgttgctg ccaccctgga ggagcccagt 60
ttcttctgta tctttctttt ctggggggtc ttcttggtc tgccctcca tccccagcct 120
ctcatcccca tcttgactt ttgctagggt tggaggcgt ttcttggtag cccctcagag 180
actcagtcag cgggaataag tcctaggggt ggggggtgtg gcaagccggc ct 232
```

```
<210> 82
<211> 383
<212> DNA
<213> Homo sapien
```

```
<220>
<221> misc_feature
<222> (1)...(383)
<223> n = A,T,C or G
```

```
<400> 82
aggcgggagc agaagctaaa gccaaagccc aagaagagtg gcagtgccag cactggtgcc 60
agtaccagta ccaataacat gccagtgccg gtgccagcac cagtgggtggc ttcagtgtctg 120
gtgccagcct gaccgccact ctcacatttg ggctcttcgc tggccttggg ggagctgggtg 180
ccagcaccag tggcagctct ggtgcctgtg gtttctccta caagtgagat tttagatatt 240
gttaatcctg ccagtctttc tcttcaagcc aggggtgcac ctcagaaacc tactcaacac 300
agcactctng gcagccacta tcaatcaatt gaagttgaca ctctgcatta aatctatttg 360
ccatttcaaa aaaaaaaaaa aaa 383
```

```
<210> 83
<211> 494
<212> DNA
<213> Homo sapien
```

```
<220>
<221> misc_feature
<222> (1)...(494)
<223> n = A,T,C or G
```

```
<400> 83
accgaattgg gaccgctggc ttataagcga tcatgtcctc cagtattacc tcaacgagca 60
gggagatcga gtctatacgc tgaagaaatt tgacccgatg ggacaacaga cctgctcagc 120
ccatcctgct cggttctccc cagatgacaa atactctcga caccgaatca ccatcaagaa 180
acgcttcaag gtgctcatga cccagcaacc gcgccctgtc ctctgagggg ccttaaactg 240
atgtcttttc tgccacctgt taccctcctg agactcctga accaaactct tcggactgtg 300
agccctgatg cttttttgcc agccatactc tttggcntcc agtctctcgt ggcgattgat 360
```

tatgcttgtg tgaggcaatc atggtggcat caccatnaa gggaacacat ttganttttt	420
tttncatat tttaaattac naccagaata nttcagaata aatgaattga aaaactctta	480
aaaaaaaaaa aaaa	494

<210> 84
 <211> 380
 <212> DNA
 <213> Homo sapien

 <220>
 <221> misc_feature
 <222> (1)...(380)
 <223> n = A,T,C or G

<400> 84	
gctggtagcc tatggcgtgg ccacggangg gctcctgagg cacgggacag tgacttccca	60
agtatcctgc gccgcgtctt ctaccgtccc tacctgcaga tcttcgggca gattccccag	120
gaggacatgg acgtggccct catggagcac agcaactgct cgtcggagcc cggcttctgg	180
gcacaccctc ctggggccca ggccgggacc tgcgtctccc agtatgccaa ctggctgggtg	240
gtgctgctcc tgcgtatctt cctgctcgtg gccaacatcc tgctggtcac ttgctcattg	300
ccatgttcag ttacacattc ggcaaagtac agggcaacag cnatctctac tgggaaggcc	360
agcgttnccg cctcatccgg	380

<210> 85
 <211> 481
 <212> DNA
 <213> Homo sapien

 <220>
 <221> misc_feature
 <222> (1)...(481)
 <223> n = A,T,C or G

<400> 85	
gagttagctc ctccacaacc ttgatgaggt cgtctgcagt ggctctcgc ttcataccgc	60
tnccatcgtc atactgtagg tttgccacca cctcctgcac cttggggcgg ctaatatcca	120
ggaaactctc aatcaagtca ccgtcnatna aacctgtggc tggttctgtc ttccgctcgg	180
tgtgaaagga tctccagaag gagtgtcga tcttccccac acttttgatg actttattga	240
gtcgattctg catgtccagc aggaggttgt accagctctc tgacagtgag gtcaccagcc	300
ctatcatgcc nttgaacgtg ccgaagaaca ccgagccttg tgtggggggg gnagtctcac	360
ccagattctg cattaccaga nagccgtggc aaaaganatt gacaactcgc ccaggngaa	420
aaagaacacc tcttggaagt gctngccgct cctcgtccnt tgggtggngc gentnccttt	480
t	481

<210> 86
 <211> 472
 <212> DNA
 <213> Homo sapien

 <220>
 <221> misc_feature
 <222> (1)...(472)
 <223> n = A,T,C or G

<400> 86

```

aacatcttcc tgtataatgc tgtgtaatat cgatccgatn ttgtctgctg agaattcatt      60
acttggaataa gcaacttnaa gcctggacac tgggtattaaa attcacaata tgcaacactt      120
taaacagtgt gtcaatctgc tcccttactt tgtcatcacc agtctgggaa taagggtatg      180
ccctattcac acctgttaaa agggcgctaa gcatttttga ttcaacatct ttttttttga      240
cacaagtccg aaaaaagcaa aagtaaacag ttnttaattt gttagccaat tcacttttctt      300
catgggacag agccatttga tttaaaaagc aaattgcata atattgagct ttgggagctg      360
atatntgagc ggaagantag cttttctact tcaccagaca caactccttt catattggga      420
tgtnacnaa agttatgtct cttacagatg ggatgctttt gtggcaattc tg                472

```

```

<210> 87
<211> 413
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> (1)...(413)
<223> n = A,T,C or G

```

```

<400> 87
agaaaccagt atctctnaaa acaacctctc ataccttgtg gacctaatTT tgtgtgctg      60
tgtgtgtgcg cgcataattat atagacaggc acatcttttt tacttttgta aaagcttatg      120
cctcttttgg atctatatct gtgaaagttt taatgatctg ccataatgtc ttggggacct      180
ttgtcttctg tgtaaattgg actagagaaa acacctatnt tatgagtcaa tctagttngt      240
tttattcgac atgaaggaaa tttccagatn acaacactna caaactctcc cttgactagg      300
ggggacaaaag aaaagcnaaa ctgaacatna gaaacaattn cctggtgaga aattncataa      360
acagaaattg ggtngtatat tgaaanang catcattnaa acgttttttt ttt                413

```

```

<210> 88
<211> 448
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> (1)...(448)
<223> n = A,T,C or G

```

```

<400> 88
cgcagcgggt cctctctatc tagctccagc ctctcgctg ccccaactccc cgcgtcccgc      60
gtcctagccn accatggccg ggccccctgc cgccccgctg ctctgtctgg ccatacctggc      120
cgtggccctg gccgtgagcc ccgcggccgg ctccagctcc ggcaagccgc cgcgcctggt      180
gggaggccca tggaccccgc gtggaagaag aagggtgtgc gcgtgcactg gactttgccg      240
tcggcnanta caacaaaccc gcaacnactt ttaccnagcn cgcgctgcag gttgtgccgc      300
cccaancaaa ttgttactng gggtaanata ttcttggaag ttgaacctgg gccaaacnng      360
tttaccagaa ccnagccaat tngaacaatt nccccccat aacagcccct tttaaaaagg      420
gaancantcc tgntcttttc caaatTTT                448

```

```

<210> 89
<211> 463
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature

```

<222> (1)...(463)

<223> n = A,T,C or G

<400> 89

gaattttgtg	cactggccac	tgtgatggaa	ccattggggc	aggatgcttt	gagtttatca	60
gtagtattc	tgccaaagt	ggtgttgtaa	catgagtatg	taaaatgtca	aaaaattagc	120
agaggtctag	gtctgcatat	cagcagacag	tttgcccg	tattttgtag	ccttgaagtt	180
ctcagtgaca	agttntttct	gatgcgaagt	tctnattcca	gtgttttagt	cctttgcatc	240
tttnatgtn	agacttgcct	ctntnaaatt	gcttttgtnt	tctgcaggta	ctatctgtgg	300
tttaacaaaa	tagaannact	tctctgcttn	gaanatttga	atatcttaca	tctnaaaatn	360
aattctctcc	ccatannaaa	acccangccc	ttggganaat	ttgaaaaaang	gntccttcnn	420
aattcnnana	anttcagntn	tcatacaaca	naacngganc	ccc		463

<210> 90

<211> 400

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(400)

<223> n = A,T,C or G

<400> 90

agggattgaa	ggtctnttnt	actgtcggac	tgttcancca	ccaactctac	aagttgctgt	60
cttccactca	ctgtctgtaa	gcntnttaac	ccagactgta	tcttcataaa	tagaacaat	120
tcttcaccag	tcacatcttc	taggaccttt	ttggattcag	ttagtataag	ctcttccact	180
tcctttgtta	agacttcatc	tggtaaagtc	ttaagttttg	tagaaaggaa	tttaattgct	240
cgttctctaa	caatgtcctc	tccttgaagt	atttggtgta	acaaccacc	tnaagtcctt	300
ttgtgcatcc	attttaaata	tacttaatag	ggcattggtn	cactagggtta	aattctgcaa	360
gagtcactctg	tctgcaaaaag	ttgcgttagt	atatctygca			400

<210> 91

<211> 480

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(480)

<223> n = A,T,C or G

<400> 91

gagctcggat	ccaataatct	ttgtctgagg	gcagcacaca	tatncagtgc	catggnaact	60
ggtctacccc	acatgggagc	agcatgccgt	agntatataa	ggtcattccc	tgagtcagac	120
atgcctcttt	gactaccgtg	tgccagtgtc	ggtgattctc	acacacctcc	nncgcctctt	180
tgtggaaaaa	ctggcacttg	nctggaacta	gcaagacatc	acttacaaat	tcacccacga	240
gacacttgaa	aggtgtaaca	aagcgactct	tgcattgtct	tttgtccctc	cggcaccagt	300
tgtcaatact	aacccgctgg	tttgccctcca	tcacatttgt	gatctgtagc	tctggatata	360
tctcctgaca	gtactgaaga	acttcttctt	ttgtttcaaa	agcaactctt	ggtgcctggt	420
ngatcagggt	cccatttccc	agtccgaatg	ttcacatggc	atatnttact	tcccacaaaa	480

<210> 92

<211> 477

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1) ... (477)

<223> n = A,T,C or G

<400> 92

atacagccca	natcccacca	cgaagatgcg	cttggtgact	gagaacctga	tgcgggtcact	60
gggtcccgctg	tagccccagc	gactctccac	ctgctggaag	cggttgatgc	tgcactcctt	120
cccacgcagg	cagcagcggg	gccggtcaat	gaactccact	cgtggcttgg	ggttgacggg	180
taantgcagg	aagaggctga	ccacctcgcg	gtccaccagg	atgcccgact	gtgcgggacc	240
tgcagcgaaa	ctcctcgatg	gtcatgagcg	ggaagcgaat	gangcccagg	gccttgccca	300
gaaccttccg	cctgttctct	ggcgtcacct	gcagctgctg	ccgctnacac	tcggcctcgg	360
accagcggac	aaacggcggt	gaacagccgc	acctcacgga	tgcccantgt	gtcgcgctcc	420
aggaacggcn	ccagcgtgtc	caggtcaatg	tcggtgaanc	ctccgcgggt	aatggcg	477

<210> 93

<211> 377

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1) ... (377)

<223> n = A,T,C or G

<400> 93

gaacggctgg	accttgccctc	gcattgtgct	gctggcagga	ataccttggc	aagcagctcc	60
agtccgagca	gccccagacc	gctgccgccc	gaagctaagc	ctgcctctgg	ccttccccctc	120
cgcctcaatg	cagaaccant	agtgggagca	ctgtgttttag	agttaagagt	gaacactgtg	180
tgattttact	tgggaatttc	ctctgttata	tagcttttcc	caatgcta	ttccaaacaa	240
caacaacaaa	ataacatggt	tgctgttna	gttggtataaa	agtangtgat	tctgtatnta	300
aagaaaatat	tactgttaca	tatactgctt	gcaanttctg	tatttattgg	tnctctggaa	360
ataaatatat	tattaaa					377

<210> 94

<211> 495

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1) ... (495)

<223> n = A,T,C or G

<400> 94

ccctttgagg	ggttagggtc	cagttcccag	tggaagaaac	aggccaggag	aantgcgtgc	60
cgagctgang	cagatttccc	acagtgaccc	cagagccctg	ggctatagtc	tctgacctct	120
ccaaggaaa	accaccttct	ggggacatgg	gctggagggc	aggacctaga	ggcaccaagg	180
gaaggcccca	ttccggggct	gttccccgag	gaggaaggga	aggggctctg	tgtgcccccc	240
acgaggaana	ggccctgant	cctgggatca	nacaccctt	cacgtgtatc	cccacacaaa	300
tgcaagctca	ccaagggtccc	ctctcagtc	cttccctaca	ccctgaacgg	ncactggccc	360
acacccaccc	agancancca	cccgccatgg	ggaatgtntc	caagggaatcg	cngggcaacg	420
tggactctng	ttccnnaagg	gggcagaatc	tccaatagan	gganngaacc	cttgctnana	480

aaaaaaaaana aaaaaa

495

<210> 95
 <211> 472
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(472)
 <223> n = A,T,C or G

<400> 95
 ggttacttgg tttcattgcc accacttagt ggatgtcatt tagaaccatt ttgtctgctc 60
 cctctggaag ccttgccgag agcggacttt gtaattgttg gagaataact gctgaatttt 120
 tagctgtttt gagttgattc gcaccactgc accacaactc aatatgaaaa ctatttnact 180
 tatttattat cttgtgaaaa gtatacaatg aaaattttgt tcatactgta tttatcaagt 240
 atgatgaaaa gcaatagata tatattcttt tattatgtn aattatgatt gccattatta 300
 atcggcaaaa tgtggagtgt atgttctttt cacagtaata tatgcctttt gtaacttcac 360
 ttggttattt tattgtaaat gaattacaaa attcttaatt taagaaaatg gtangttata 420
 ttanttcan taatttcttt ccttgtttac gttaattttg aaaagaatgc at 472

<210> 96
 <211> 476
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(476)
 <223> n = A,T,C or G

<400> 96
 ctgaagcatt tcttcaaact tntctacttt tgtcattgat acctgtagta agttgacaat 60
 gtggtgaaat ttcaaaatta tatgtaactt ctactagttt tactttctcc cccaagtctt 120
 ttttaactca tgattttttac acacacaatc cagaacttat tatatagcct ctaagtcttt 180
 attcttcaca gtagatgatg aaagagtcct ccagtgtctt gngcanaatg ttctagntat 240
 agctggatac atacngtggg agttctataa actcatacct cagtgggact naaccaaaat 300
 tgtgttagtc tcaattccta ccacactgag ggagcctccc aaatcactat attcttatct 360
 gcaggtactc ctccagaaaa acngacaggg caggcttgca tgaaaaagtn acatctgcgt 420
 tacaaaagtct atcttctccta nangtctgtn aaggaacaat ttaatcttct agcttt 476

<210> 97
 <211> 479
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(479)
 <223> n = A,T,C or G

<400> 97
 actctttcta atgctgatat gatcttgagt ataagaatgc atatgtcact agaatggata 60
 aaataatgct gcaaacttaa tgttcttatg caaaatggaa cgctaataa acacagctta 120

caatcgcaaa	tcaaaactca	caagtgtctca	tctgtttag	atttagtgta	ataagactta	180
gattgtgtctc	cttcggatat	gattgtttct	canatcttgg	gcaatnttcc	ttagtcaaat	240
caggctacta	gaattctgtt	attggatatn	tgagagcatg	aaatTTTTaa	naatacactt	300
gtgattatna	aattaatcac	aaatttcact	tatacctgct	atcagcagct	agaaaaacat	360
ntnnTTTTta	natcaaagta	TTTTgtgttt	ggaantgtnn	aaatgaaatc	tgaatgtggg	420
ttcnatctta	TTTTTcccn	gacnactant	tnctTTTTta	gggnctattc	tganccatc	479

<210> 98

<211> 461

<212> DNA

<213> Homo sapien

<400> 98

agtgacttgt	cctccaacaa	aacccttga	tcaagtttgt	ggcactgaca	atcagaccta	60
tgctagtcc	tgctatctat	tcgtactaa	atgcagactg	gaggggacca	aaaaggggca	120
tcaactccag	ctggattatt	ttggagcctg	caaatctatt	cctacttgta	cggactttga	180
agtgattcag	tttctctac	ggatgagaga	ctggctcaag	aatatcctca	tcgagcttta	240
tgaagccact	ctgaacacgc	tggttatcta	gatgagaaca	gagaaataaa	gtcagaaaaat	300
ttacctggag	aaaagaggct	ttggctgggg	accatcccat	tgaaccttct	cttaaggact	360
ttaagaaaaa	ctaccacatg	ttgtgtatcc	tggtgccggc	cgtttatgaa	ctgaccaccc	420
tttgaataaa	tcttgacgct	cctgaacttg	ctcctctgcg	a		461

<210> 99

<211> 171

<212> DNA

<213> Homo sapien

<400> 99

gtggccgcgc	gcaggtgttt	cctcgtaccg	cagggccccc	tcctttcccc	aggcgtccct	60
cggcgccctct	gcgggcccga	ggaggagcgg	ctggcggggtg	gggggagtgt	gaccacccct	120
cggtgagaaa	agccttctct	agcgatctga	gaggcggtgcc	ttgggggtac	c	171

<210> 100

<211> 269

<212> DNA

<213> Homo sapien

<400> 100

cggccgcaag	tgcaactcca	gctggggccg	tgccgacgaa	gattctgccca	gcagttggct	60
cgactgcgac	gacggcggcg	gcgacagtcg	caggtgcagc	gcggggcgct	ggggtcttgc	120
aaggctgagc	tgacgccgca	gaggtcgtgt	cacgtcccac	gaccttgacg	ccgtcgggga	180
cagccggaac	agagcccggg	gaagcgggag	gcctcgggga	gccccctcggg	aagggcggcc	240
cgagagatac	gcaggtgcag	gtggccgcc				269

<210> 101

<211> 405

<212> DNA

<213> Homo sapien

<400> 101

TTTTTTTTTT	TTTTggaatc	tactgcgagc	acagcaggtc	agcaacaagt	ttattttgca	60
gctagcaagg	taacagggtta	gggcatgggt	acatgttcag	gtcaacttcc	tttgtcgtgg	120
ttgattgggt	tgtctttatg	ggggcggggg	ggggtagggg	aaacgaagca	aataacatgg	180
agtgggtgca	ccctccctgt	agaacctggg	tacaaagctt	ggggcagttc	acctggctcg	240
tgaccgtcat	tttcttgaca	tcaatgttat	tagaagtcag	gatattcttt	agagagtcca	300

ctgttctgga gggagattag ggtttcttgc caaatccaac aaaatccact gaaaaagttg 360
 gatgatcagt acgaataccg aggcatattc tcatatcggg ggcca 405

<210> 102
 <211> 470
 <212> DNA
 <213> Homo sapien

<400> 102
 tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt 60
 ggcacttaat ccattttttat ttcaaaatgt ctacaaattt aatcccatta tacgggtattt 120
 tcaaaatcta aattattcaa attagccaaa tccttaccaa ataataccca aaaatcaaaa 180
 atatacttct ttcagcaaac ttgttacata aattaaaaaa atatatacgg ctggtgtttt 240
 caaagtacaa ttatcttaac actgcaaac ttttaaggaa ctaaaataaa aaaaaacact 300
 ccgcaaagggt taaagggaac aacaaattct tttacaacac cattataaaa atcatatctc 360
 aaatcttagg ggaatatata cttcacacgg gatcttaact tttactcact ttgtttattt 420
 ttttaaacca ttgtttgggc ccaacacaat ggaatcccc ctggactagt 470

<210> 103
 <211> 581
 <212> DNA
 <213> Homo sapien

<400> 103
 tttttttttt ttttttttga ccccccctct ataaaaaaca agttaccatt ttatttttact 60
 tacacatatt tattttataa ttgggtattag atattcaaaa ggcagctttt aaaatcaaac 120
 taaatggaaa ctgccttaga tacataattc ttaggaatta gcttaaaatc tgcctaaagt 180
 gaaaatcttc tctagctctt ttgactgtaa atttttgact cttgtaaaac atccaaattc 240
 atttttcttg tctttaaaat tatctaattc ttccattttt tccctattcc aagtcaattt 300
 gcttctctag cctcatttcc tagctcttat ctactattag taagtggctt ttttcctaaa 360
 agggaaaaca ggaagagaaa tggcacacaa aacaaacatt ttatattcat atttctacct 420
 acgttaataa aatagcattt tgtgaagcca gctcaaaaga aggcttagat ccttttatgt 480
 ccatttttagt cactaaacga tatcaaagtg ccagaatgca aaagggttgt gaacatttat 540
 tcaaaagcta atataagata tttcacatac tcatctttct g 581

<210> 104
 <211> 578
 <212> DNA
 <213> Homo sapien

<400> 104
 tttttttttt tttttttttt tttttctctt cttttttttt gaaatgagga tctagttttt 60
 cactctctag atagggcatg aagaaaactc atctttccag ctttaaaata acaatcaaat 120
 ctcttatgct atatcatatt ttaagttaaa ctaatgagtc actggcttat ctctctctga 180
 aggaaatctg ttcattcttc tcattcatat agttatatca agtactacct tgcattattga 240
 gaggtttttt ttctctattt acacatatat ttccatgtga atttgatca aacctttatt 300
 ttcatgcaaa ctagaaaata atgtttcttt tgcataagag aagagaacaa tatagcatta 360
 caaaactgct caaattgttt gttaagttat ccattataat tagttggcag gagctaatac 420
 aaatcacatt tacgacagca ataataaaac tgaagtacca gttaaatata caaaataatt 480
 aaaggaacat ttttagcctg ggtataatta gctaattcac tttacaagca tttattagaa 540
 tgaattcaca tggtattatt cctagcccaa cacaatgg 578

<210> 105
 <211> 538
 <212> DNA

<213> Homo sapien

<400> 105

tttttttttt	tttttcagta	ataatcagaa	caatatttat	ttttatatatt	aaaattcata	60
gaaaagtgcc	ttacatttaa	taaaagtttg	tttctcaaag	tgatcagagg	aattagatat	120
gtcttgaaca	ccaatattaa	tttgaggaaa	atacaccaaa	atacattaag	taaattattt	180
aagatcatag	agcttgtaag	tgaaaagata	aaatttgacc	tcagaaactc	tgagcattaa	240
aaatccacta	ttagcaaata	aattactatg	gacttcttgc	tttaattttg	tgatgaatat	300
ggggtgtcac	tggtaaacca	acacattctg	aaggatacat	tacttagtga	tagattctta	360
tgtactttgc	taatacgtgg	atatgagttg	acaagtttct	ctttcttcaa	tcttttaagg	420
ggcgagaaat	gaggaagaaa	agaaaaggat	tacgcatact	gttctttcta	tggaaggatt	480
agatatgttt	cctttgccaa	tattaaaaaa	ataataatgt	ttactactag	tgaaaccc	538

<210> 106

<211> 473

<212> DNA

<213> Homo sapien

<400> 106

tttttttttt	tttttttagtc	aagtttctat	ttttattata	attaaagtct	tggtcatttc	60
atttatttagc	tctgcaactt	acatatttaa	attaaagaaa	cgtttttagac	aactgtacaa	120
tttataaatg	taagggtgcca	ttattgagta	atatattcct	ccaagagtgg	atgtgtccct	180
tctcccacca	actaatgaac	agcaacatta	gtttaatttt	attagtagat	atacactgct	240
gcaaacgcta	attctcttct	ccatccccat	gtgatattgt	gtatatgtgt	gagttggtag	300
aatgcatcac	aatctacaat	caacagcaag	atgaagctag	gctgggcttt	cggtgaaaat	360
agactgtgtc	tgtctgaatc	aaatgatctg	acctatcctc	ggtggcaaga	actcttcgaa	420
ccgcttcctc	aaaggcgctg	ccacatttgt	ggctctttgc	acttgttcca	aaa	473

<210> 107

<211> 1621

<212> DNA

<213> Homo sapien

<400> 107

cgccatggca	ctgcagggca	tctcgggtcat	ggagctgtcc	ggcctggccc	cgggcccgtt	60
ctgtgctatg	gtcctggctg	acttcggggc	gcgtgtggta	cgctgggacc	ggcccggctc	120
ccgctacgac	gtgagccgct	tgggcccggg	caagcgctcg	ctagtgtctg	acctgaagca	180
gccgcgggga	gccgccgtgc	tgcggcgctc	gtgcaagcgg	tcggatgtgc	tgctggagcc	240
cttcgcgcgc	ggtgtcatgg	agaaactcca	gctgggcca	gagattctgc	agcgggaaaa	300
tccaaggctt	atttatgcca	ggctgagtgg	atttggccag	tcaggaagct	tctgccggtt	360
agctggccac	gatatcaact	atttggcttt	gtcaggtgtt	ctctcaaaaa	ttggcagaag	420
tggtgagaat	ccgtatgccc	cgctgaatct	cctggctgac	tttgctggtg	gtggccttat	480
gtgtgcactg	ggcattataa	tggctctttt	tgaccgcaca	cgactgaca	agggtcaggt	540
cattgatgca	aatatggtgg	aaggaacagc	atattttaagt	tcttttctgt	ggaaaactca	600
gaaatcgagt	ctgtgggaag	cacctcgagg	acagaacatg	ttggatggtg	gagcaccttt	660
ctatacgact	tacaggacag	cagatgggga	attcatggct	gttggagcaa	tagaacccca	720
gttctacgag	ctgctgatca	aaggacttgg	actaaagtct	gatgaacttc	ccaatcagat	780
gagcatggat	gattggccag	aaatgaagaa	gaagtttgca	gatgtatttg	caaagaagac	840
gaaggcagag	tgggtgtcaa	tctttgacgg	cacagatgcc	tgtgtgactc	cggttctgac	900
ttttgaggag	gttgttcatc	atgatcacia	caaggaacgg	ggctcgttta	tcaccagtga	960
ggagcaggac	gtgagccccc	gccctgcacc	tctgtgtgta	aacaccccag	ccatcccttc	1020
tttcaaaagg	gatcctttca	taggagaaca	cactgaggag	atacttgaag	aatttggtatt	1080
cagccgcgaa	gagatttatc	agcttaactc	agataaaatc	attgaaagta	ataaggtaaa	1140
agctagtctc	taacttccag	gcccacggct	caagtgaatt	tgaatactgc	atttacagtg	1200
tagagtaaca	cataacattg	tatgcatgga	aacatggagg	aacagtatta	cagtgtccta	1260

```

ccactctaata caagaaaaga attacagact ctgattctac agtgatgatt gaattctaaa 1320
aatgggtatc attagggttt ttgatttata aaactttggg tacttatact aaattatggg 1380
agttattctg ccttccagtt tgcttgatat atttggtgat attaagattc ttgacttata 1440
ttttgaatgg gttctagtga aaaaggaatg atatattctt gaagacatcg atatacattt 1500
atttacactc ttgattctac aatgtagaaa atgaggaaat gccacaaatt gtatgggtgat 1560
aaaagtcacg tgaaacaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1620
a 1621

```

<210> 108

<211> 382

<212> PRT

<213> Homo sapien

<400> 108

```

Met Ala Leu Gln Gly Ile Ser Val Met Glu Leu Ser Gly Leu Ala Pro
1      5      10      15
Gly Pro Phe Cys Ala Met Val Leu Ala Asp Phe Gly Ala Arg Val Val
20     25     30
Arg Val Asp Arg Pro Gly Ser Arg Tyr Asp Val Ser Arg Leu Gly Arg
35     40     45
Gly Lys Arg Ser Leu Val Leu Asp Leu Lys Gln Pro Arg Gly Ala Ala
50     55     60
Val Leu Arg Arg Leu Cys Lys Arg Ser Asp Val Leu Leu Glu Pro Phe
65     70     75     80
Arg Arg Gly Val Met Glu Lys Leu Gln Leu Gly Pro Glu Ile Leu Gln
85     90     95
Arg Glu Asn Pro Arg Leu Ile Tyr Ala Arg Leu Ser Gly Phe Gly Gln
100    105    110
Ser Gly Ser Phe Cys Arg Leu Ala Gly His Asp Ile Asn Tyr Leu Ala
115    120    125
Leu Ser Gly Val Leu Ser Lys Ile Gly Arg Ser Gly Glu Asn Pro Tyr
130    135    140
Ala Pro Leu Asn Leu Leu Ala Asp Phe Ala Gly Gly Gly Leu Met Cys
145    150    155    160
Ala Leu Gly Ile Ile Met Ala Leu Phe Asp Arg Thr Arg Thr Asp Lys
165    170    175
Gly Gln Val Ile Asp Ala Asn Met Val Glu Gly Thr Ala Tyr Leu Ser
180    185    190
Ser Phe Leu Trp Lys Thr Gln Lys Ser Ser Leu Trp Glu Ala Pro Arg
195    200    205
Gly Gln Asn Met Leu Asp Gly Gly Ala Pro Phe Tyr Thr Thr Tyr Arg
210    215    220
Thr Ala Asp Gly Glu Phe Met Ala Val Gly Ala Ile Glu Pro Gln Phe
225    230    235    240
Tyr Glu Leu Leu Ile Lys Gly Leu Gly Leu Lys Ser Asp Glu Leu Pro
245    250    255
Asn Gln Met Ser Met Asp Asp Trp Pro Glu Met Lys Lys Lys Phe Ala
260    265    270
Asp Val Phe Ala Lys Lys Thr Lys Ala Glu Trp Cys Gln Ile Phe Asp
275    280    285
Gly Thr Asp Ala Cys Val Thr Pro Val Leu Thr Phe Glu Glu Val Val
290    295    300
His His Asp His Asn Lys Glu Arg Gly Ser Phe Ile Thr Ser Glu Glu
305    310    315    320
Gln Asp Val Ser Pro Arg Pro Ala Pro Leu Leu Leu Asn Thr Pro Ala

```

```
<210> 109
<211> 1524
<212> DNA
<213> Homo sapien
```

<400> 109

ggcacgaggc	tgcgccaggg	cctgagcgga	ggcgggggca	gcctcgccag	cgggggcccc	60
gggcctggcc	atgcctcact	gagccagcgc	ctgcgcctct	acctcgccga	cagctggaac	120
cagtgcgacc	tagtggctct	cacctgcttc	ctcctgggcg	tgggtgcgcg	gctgaccccg	180
ggtttgtacc	acctgggccc	cactgtcctc	tgcctcgact	tcattggtttt	cacggtgcgg	240
ctgcttcaca	tcttcacggg	caacaaacag	ctggggccca	agatcgctcat	cgtgagcaag	300
atgatgaagg	acgtgttctt	cttcctcttc	ttcctcggcg	tgtggctggg	agcctatggc	360
gtggccacgg	aggggctcct	gaggccacgg	gacagtgact	tcccaagtat	cctgcgccgc	420
gtcttctacc	gtccctacct	gcagatcttc	gggcagattc	cccaggagga	catggacgtg	480
gccctcatgg	agcacagca	ctgctcgctc	gagcccggct	tctgggcaca	ccctcctggg	540
gcccaggcgg	gcacctggct	ctcccagtat	gccaaactggc	tgggtgggtgt	gctcctcgtc	600
atcttcctgc	tcgtggccaa	catcctgctg	gtcaacttgc	tcattgccat	gttcagttac	660
acattcggca	aagtacaggg	caacacgcgt	ctctactgga	aggcgcagcg	ttaccgcctc	720
atccgggaat	tccactctcg	gcccgcgctg	gccccgcctt	ttatcgctcat	ctcccacttg	780
cgcctcctgc	tcaggcaatt	gtgcaggcga	ccccggagcc	cccagccgtc	ctccccggcc	840
ctcgagcatt	tccgggttta	cctttctaa	gaagccgagc	ggaagctgct	aa:ctgggaa	900
tcggtgcata	aggagaactt	tctgctggca	cgcgctaggg	acaagcgggg	gagcgactcc	960
gagcgtctga	agcgcacgtc	ccagaagggtg	gacttggcac	tgaacagct	gggacacatc	1020
cgcgagtacg	aacagcgcct	gaaagtgtctg	gagcgggagg	tccagcagtg	tagccgcgtc	1080
ctgggggtggg	tggccgaggc	cctgagccgc	tctgccttgc	tgccccagg	tgggccgcca	1140
cccctgacc	tgcctgggtc	caaagactga	gccctgctgg	cggacttcaa	ggagaagccc	1200
ccacagggga	ttttgtctc	agagtaaggc	tcattctggg	ctcgccccc	gcacctgggtg	1260
gccttgtcct	tgaggtgagc	cccatgtcca	tctgggccac	tgtcaggacc	acctttggga	1320
gtgtcatcct	tacaaaccac	agcatgcccc	gctctcccca	gaaccagtcc	cagcctggga	1380
ggatcaaggc	ctggatcccc	ggccgttata	catctggagg	ctgcagggtc	cttggggtaa	1440
cagggaccac	agacccctca	ccactcacag	attcctcaca	ctggggaaat	aaagccattt	1500
cagaggaaaa	aaaaaaaaaa	aaaa				1524

```
<210> 110
<211> 3410
<212> DNA
<213> Homo sapien
```

<400> 110

gggaaccagc	ctgcacgcgc	tggctccggg	tgacagccgc	gcgcctcggc	caggatctga	60
gtgatgagac	gtgtccccac	tgaggtgccc	cacagcagca	ggtgttgagc	atgggctgag	120
aagctggacc	ggcaccaaag	ggctggcaga	aatgggcgcc	tggctgattc	ctaggcagtt	180
ggcggcgagca	aggaggagag	gccgcagctt	ctggagcaga	gccgagacga	agcagttctg	240
gagtgcctga	acggcccccct	gagccctacc	cgcttgccc	actatgggtcc	agaggtctgtg	300
ggtgagccgc	ctgctgcggc	accggaaagc	ccagctcttg	ctggtcaacc	tgctaacctt	360
tggcctggag	gtgtgttttg	ccgcaggcat	cacctatgtg	ccgcctctgc	tgctggaagt	420
gggggtagag	gagaagttca	tgaccatggg	gctgggcatt	ggtccagtgc	tgggcctggt	480

ctgtgtcccc	ctcctagget	cagccagtga	ccactggcgt	ggacgctatg	gccgccgccg	540
gcccttcac	tgggcactgt	ccttgggcat	cctgtgagc	ctctttctca	tcccaagggc	600
cggctggcta	gcagggctgc	tgtgcccga	tcccaggccc	ctggagctgg	cactgctcat	660
cctgggcgtg	gggctgctgg	acttctgtgg	ccaggtgtgc	ttcactccac	tggaggccct	720
gctctctgac	ctcttcggg	acccggaaca	ctgtcgccag	gcctactctg	tctatgcctt	780
catgatcagt	cttgggggct	gcctgggcta	cctcctgcct	gccattgact	gggacaccag	840
tgccttggcc	ccctacctgg	gcacccagga	ggagtgcctc	tttggcctgc	tcaccctcat	900
cttcctcacc	tgcgtagcag	ccacactgct	ggtggctgag	gaggcagcgc	tgggccccac	960
cgagccagca	gaagggctgt	cggccccctc	cttgtcgccc	cactgctgtc	catgccgggc	1020
ccgcttggct	ttccggaacc	tgggcgccct	gcttccccgg	ctgcaccagc	tgtgctgccg	1080
catgccccgc	accctgcgcc	ggctcttcgt	ggctgagctg	tgcagctgga	tggcactcat	1140
gaccttcacg	ctgttttaca	cggatttcgt	gggcgagggg	ctgtaccagg	gcgtgcccag	1200
agctgagccg	ggcaccgagg	cccggagaca	ctatgatgaa	ggcgttcgga	tgggcagcct	1260
ggggctgttc	ctgcagtgcg	ccatctccct	ggtcttctct	ctgggtcatgg	accggctggt	1320
gcagcgattc	ggcactcgag	cagtctatatt	ggccagtgtg	gcagctttcc	ctgtggctgc	1380
cgggtgccaca	tgcctgtccc	acagtgtggc	cgtgggtgaca	gcttcagccg	ccctcaccgg	1440
gttcaccttc	tcagccctgc	agatcctgcc	ctacacactg	gcctccctct	accaccggga	1500
gaagcaggtg	ttcctgccc	aataccgagg	ggacactgga	ggtgctagca	gtgaggacag	1560
cctgatgacc	agcttcctgc	caggccctaa	gcctggagct	cccttcctta	atggacacgt	1620
gggtgctgga	ggcagtggcc	tgtctccacc	tccaccgcg	ctctgcgggg	cctctgcctg	1680
tgatgtctcc	gtacgtgtgg	tggtaggtga	gcccaccgag	gccaggggtg	ttccggggccg	1740
gggcatctgc	ctggacctcg	ccatcctgga	tagtgccttc	ctgctgtccc	aggtggcccc	1800
atccctgttt	atgggtcca	ttgtccagct	cagccagtct	gtcactgcct	atatggtgtc	1860
tgccgcaggc	ctgggtctgg	tgcctattta	ctttgtctaca	caggtagtat	ttgacaaga	1920
cgacttgccc	aaatactcag	cgtagaaaac	ttccagcaca	ttgggggtgga	gggcctgcct	1980
cactgggtcc	cagctccccg	ctcctgttag	ccccatgggg	ctgccgggct	ggccgccagt	2040
ttctgttgct	gccaaagtaa	tgtggctctc	tgtgtccacc	ctgtgctgct	gaggtgctga	2100
gctgcacagc	tgggggctgg	ggcgtccctc	tcctctctcc	ccagtctcta	gggctgcccg	2160
actggaggcc	ttccaagggg	gtttcagttc	ggacttatac	agggaggcca	gaagggctcc	2220
atgcactgga	atgcggggac	tctgcagggtg	gattaccacg	gctcagggtt	aacagctagc	2280
ctcctagttg	agacacacct	agagaagggg	ttttgggagc	tgaataaact	cagtacacctg	2340
gtttcccatc	tctaagcccc	ttaacctgca	gcttcgttta	atgtagctct	tgcattgggag	2400
tttctaggat	gaaacactcc	tccatgggat	ttgaacatat	gacttattttg	taggggaaga	2460
gtcctgaggg	gcaacacaca	agaaccagg	cccctcagcc	cacagcactg	tctttttgct	2520
gatccacccc	cctcttacct	tttatcagga	tgtggcctgt	tggtccttct	gttgccatca	2580
cagagacaca	ggcattttaa	tatttaactt	atttatttaa	caaagtagaa	gggaatccat	2640
tgttagcttt	tctgtgttgg	tgtctaatat	ttgggtaggg	tgggggatcc	ccaacaatca	2700
gggtcccctga	gatagctggg	cattgggctg	atcattgcc	gaatcttctt	ctcctggggg	2760
ctggcccccc	aaaatgccta	accaggacc	ttggaaattc	tactcatccc	aaatgataat	2820
tccaaatgct	gttaccacaag	gttaggggtg	tgaaggaaag	tagaggggtg	ggcttcagggt	2880
ctcaacggct	tccttaacca	cccctcttct	cttggcccag	cctggttccc	cccacttcca	2940
ctcccctcta	ctctctctag	gactgggctg	atgaaggcac	tgccccaaat	ttcccctacc	3000
cccaactttc	ccctaccccc	aactttcccc	accagctcca	caaccctgtt	tggagctact	3060
gcaggaccag	aagcacaaa	tgcggtttcc	caagcctttg	tccatctcag	ccccagagt	3120
atatctgtgc	ttggggaatc	tcacacagaa	actcaggagc	acccctgcc	tgagctaagg	3180
gaggtcttat	ctctcagggg	gggtttaagt	gccgtttgca	ataatgtcgt	cttattttatt	3240
tagcgggggtg	aatattttat	actgtaagt	agcaatcaga	gtataatgtt	tatggtgaca	3300
aaattaaagg	ctttcttata	tgtttaaaaa	aaaaaaaaaa	aaaaaaaaaa	aaaaaaaaaa	3360
aaaaaaaaara	aaaaaaaaaa	aaaaaaaaaa	aaaaaaataa	aaaaaaaaaa		3410

<210> 111

<211> 1289

<212> DNA

<213> Homo sapien

<400> 111

agccaggcgt	ccctctgcct	gcccactcag	tggcaacacc	cgggagctgt	tttgtccttt	60
gtggagcctc	agcagttccc	tctttcagaa	ctcactgccca	agagccctga	acaggagcca	120
ccatgcagtg	cttcagcttc	attaagacca	tgatgatcct	cttcaatttg	ctcatctttc	180
tgtgtggtgc	agccctgttg	gcagtgggca	tctgggtgtc	aatcgatggg	gcatectttc	240
tgaagatctt	cgggccactg	tcgtccagtg	ccatgcagtt	tgtcaacgtg	ggctacttcc	300
tcategcagc	cggcggttg	gtctttgtct	ttggtttcc	gggctgctat	gggtgctaaga	360
ctgagagcaa	gtgtgccctc	gtgacgttct	tcttcatect	cctcctcatc	ttcattgctg	420
aggttgagc	tgctgtgggtc	gccttggtgt	acaccacaat	ggctgagcac	ttcctgacgt	480
tgctggtagt	gcctgccatc	aagaaagatt	atggttccca	ggaagacttc	actcaagtgt	540
ggaacaccac	catgaaagg	ctcaagtgt	gtggcttcac	caactatacg	gattttgagg	600
actcacccta	cttcaaagag	aacagtgcct	ttccccatt	ctgttgcaat	gacaacgtca	660
ccaacacagc	caatgaaacc	tgcaccaagc	aaaagggtca	cgaccacaaa	gtagagggtt	720
gcttcaatca	gcttttgtat	gacatccgaa	ctaatgcagt	caccgtgggt	gggtgtggcag	780
ctggaattgg	gggcctcgag	ctggctgccca	tgattgtgtc	catgtatctg	tactgcaatc	840
tacaataagt	ccacttctgc	ctctgccact	actgctgccca	catgggaact	gtgaagaggc	900
accctggcaa	gcagcagtg	ttggggggagg	ggacaggatc	taacaatgtc	acttggggcca	960
gaatggacct	gccctttctg	ctccagactt	ggggctagat	agggaccact	ccttttagcg	1020
atgcctgact	ttccttccat	tgggtgggtgg	atgggtgggg	ggcattccag	agcctctaag	1080
gtagccagtt	ctgttgccca	ttccccag	ctattaaacc	cttgatatgc	cccctaggcc	1140
tagtggtgat	cccagtgctc	tactggggga	tgagagaaa	gcattttata	gcctgggcat	1200
aagtgaaatc	agcagagcct	ctgggtggat	gtgtagaagg	cacttcaaaa	tgcataaacc	1260
tgttacaatg	ttaaaaaaaa	aaaaaaaaa				1289

<210> 112

<211> 315

<212> PRT

<213> Homo sapien

<400> 112

Met	Val	Phe	Thr	Val	Arg	Leu	Leu	His	Ile	Phe	Thr	Val	Asn	Lys	Gln
1				5					10					15	
Leu	Gly	Pro	Lys	Ile	Val	Ile	Val	Ser	Lys	Met	Met	Lys	Asp	Val	Phe
			20					25					30		
Phe	Phe	Leu	Phe	Phe	Leu	Gly	Val	Trp	Leu	Val	Ala	Tyr	Gly	Val	Ala
		35				40						45			
Thr	Glu	Gly	Leu	Leu	Arg	Pro	Arg	Asp	Ser	Asp	Phe	Pro	Ser	Ile	Leu
	50				55					60					
Arg	Arg	Val	Phe	Tyr	Arg	Pro	Tyr	Leu	Gln	Ile	Phe	Gly	Gln	Ile	Pro
65					70					75				80	
Gln	Glu	Asp	Met	Asp	Val	Ala	Leu	Met	Glu	His	Ser	Asn	Cys	Ser	Ser
			85						90					95	
Glu	Pro	Gly	Phe	Trp	Ala	His	Pro	Pro	Gly	Ala	Gln	Ala	Gly	Thr	Cys
			100					105					110		
Val	Ser	Gln	Tyr	Ala	Asn	Trp	Leu	Val	Val	Leu	Leu	Leu	Val	Ile	Phe
		115				120						125			
Leu	Leu	Val	Ala	Asn	Ile	Leu	Leu	Val	Asn	Leu	Leu	Ile	Ala	Met	Phe
		130				135						140			
Ser	Tyr	Thr	Phe	Gly	Lys	Val	Gln	Gly	Asn	Ser	Asp	Leu	Tyr	Trp	Lys
145					150					155					160
Ala	Gln	Arg	Tyr	Arg	Leu	Ile	Arg	Glu	Phe	His	Ser	Arg	Pro	Ala	Leu
			165						170					175	
Ala	Pro	Pro	Phe	Ile	Val	Ile	Ser	His	Leu	Arg	Leu	Leu	Leu	Arg	Gln
			180					185						190	
Leu	Cys	Arg	Arg	Pro	Arg	Ser	Pro	Gln	Pro	Ser	Ser	Pro	Ala	Leu	Glu

195 200 205
 His Phe Arg Val Tyr Leu Ser Lys Glu Ala Glu Arg Lys Leu Leu Thr
 210 215 220
 Trp Glu Ser Val His Lys Glu Asn Phe Leu Leu Ala Arg Ala Arg Asp
 225 230 235 240
 Lys Arg Glu Ser Asp Ser Glu Arg Leu Lys Arg Thr Ser Gln Lys Val
 245 250 255
 Asp Leu Ala Leu Lys Gln Leu Gly His Ile Arg Glu Tyr Glu Gln Arg
 260 265 270
 Leu Lys Val Leu Glu Arg Glu Val Gln Gln Cys Ser Arg Val Leu Gly
 275 280 285
 Trp Val Ala Glu Ala Leu Ser Arg Ser Ala Leu Leu Pro Pro Gly Gly
 290 295 300
 Pro Pro Pro Pro Asp Leu Pro Gly Ser Lys Asp
 305 310 315

<210> 113
 <211> 553
 <212> PRT
 <213> Homo sapien

<400> 113
 Met Val Gln Arg Leu Trp Val Ser Arg Leu Leu Arg His Arg Lys Ala
 1 5 10 15
 Gln Leu Leu Leu Val Asn Leu Leu Thr Phe Gly Leu Glu Val Cys Leu
 20 25 30
 Ala Ala Gly Ile Thr Tyr Val Pro Pro Leu Leu Leu Glu Val Gly Val
 35 40 45
 Glu Glu Lys Phe Met Thr Met Val Leu Gly Ile Gly Pro Val Leu Gly
 50 55 60
 Leu Val Cys Val Pro Leu Leu Gly Ser Ala Ser Asp His Trp Arg Gly
 65 70 75 80
 Arg Tyr Gly Arg Arg Arg Pro Phe Ile Trp Ala Leu Ser Leu Gly Ile
 85 90 95
 Leu Leu Ser Leu Phe Leu Ile Pro Arg Ala Gly Trp Leu Ala Gly Leu
 100 105 110
 Leu Cys Pro Asp Pro Arg Pro Leu Glu Leu Ala Leu Leu Ile Leu Gly
 115 120 125
 Val Gly Leu Leu Asp Phe Cys Gly Gln Val Cys Phe Thr Pro Leu Glu
 130 135 140
 Ala Leu Leu Ser Asp Leu Phe Arg Asp Pro Asp His Cys Arg Gln Ala
 145 150 155 160
 Tyr Ser Val Tyr Ala Phe Met Ile Ser Leu Gly Gly Cys Leu Gly Tyr
 165 170 175
 Leu Leu Pro Ala Ile Asp Trp Asp Thr Ser Ala Leu Ala Pro Tyr Leu
 180 185 190
 Gly Thr Gln Glu Glu Cys Leu Phe Gly Leu Leu Thr Leu Ile Phe Leu
 195 200 205
 Thr Cys Val Ala Ala Thr Leu Val Ala Glu Glu Ala Ala Leu Gly
 210 215 220
 Pro Thr Glu Pro Ala Glu Gly Leu Ser Ala Pro Ser Leu Ser Pro His
 225 230 235 240
 Cys Cys Pro Cys Arg Ala Arg Leu Ala Phe Arg Asn Leu Gly Ala Leu
 245 250 255
 Leu Pro Arg Leu His Gln Leu Cys Cys Arg Met Pro Arg Thr Leu Arg


```

                260                265                270
Arg Leu Phe Val Ala Glu Leu Cys Ser Trp Met Ala Leu Met Thr Phe
                275                280                285
Thr Leu Phe Tyr Thr Asp Phe Val Gly Glu Gly Leu Tyr Gln Gly Val
                290                295                300
Pro Arg Ala Glu Pro Gly Thr Glu Ala Arg Arg His Tyr Asp Glu Gly
305                310                315                320
Val Arg Met Gly Ser Leu Gly Leu Phe Leu Gln Cys Ala Ile Ser Leu
                325                330                335
Val Phe Ser Leu Val Met Asp Arg Leu Val Gln Arg Phe Gly Thr Arg
                340                345                350
Ala Val Tyr Leu Ala Ser Val Ala Ala Phe Pro Val Ala Ala Gly Ala
                355                360                365
Thr Cys Leu Ser His Ser Val Ala Val Val Thr Ala Ser Ala Ala Leu
                370                375                380
Thr Gly Phe Thr Phe Ser Ala Leu Gln Ile Leu Pro Tyr Thr Leu Ala
385                390                395                400
Ser Leu Tyr His Arg Glu Lys Gln Val Phe Leu Pro Lys Tyr Arg Gly
                405                410                415
Asp Thr Gly Gly Ala Ser Ser Glu Asp Ser Leu Met Thr Ser Phe Leu
                420                425                430
Pro Gly Pro Lys Pro Gly Ala Pro Phe Pro Asn Gly His Val Gly Ala
                435                440                445
Gly Gly Ser Gly Leu Leu Pro Pro Pro Pro Ala Leu Cys Gly Ala Ser
                450                455                460
Ala Cys Asp Val Ser Val Arg Val Val Val Gly Glu Pro Thr Glu Ala
465                470                475                480
Arg Val Val Pro Gly Arg Gly Ile Cys Leu Asp Leu Ala Ile Leu Asp
                485                490                495
Ser Ala Phe Leu Leu Ser Gln Val Ala Pro Ser Leu Phe Met Gly Ser
                500                505                510
Ile Val Gln Leu Ser Gln Ser Val Thr Ala Tyr Met Val Ser Ala Ala
                515                520                525
Gly Leu Gly Leu Val Ala Ile Tyr Phe Ala Thr Gln Val Val Phe Asp
                530                535                540
Lys Ser Asp Leu Ala Lys Tyr Ser Ala
545                550

```

```

<210> 114
<211> 241
<212> PRT
<213> Homo sapien

```

```

<400> 114
Met Gln Cys Phe Ser Phe Ile Lys Thr Met Met Ile Leu Phe Asn Leu
1      5      10      15
Leu Ile Phe Leu Cys Gly Ala Ala Leu Ala Val Gly Ile Trp Val
20     25     30
Ser Ile Asp Gly Ala Ser Phe Leu Lys Ile Phe Gly Pro Leu Ser Ser
35     40     45
Ser Ala Met Gln Phe Val Asn Val Gly Tyr Phe Leu Ile Ala Ala Gly
50     55     60
Val Val Val Phe Ala Leu Gly Phe Leu Gly Cys Tyr Gly Ala Lys Thr
65     70     75     80
Glu Ser Lys Cys Ala Leu Val Thr Phe Phe Phe Ile Leu Leu Leu Ile

```

```
<210> 115
<211> 366
<212> DNA
<213> Homo sapien
```

```
<210> 116
<211> 282
<212> DNA
<213> Homo sapien
```

<400> 116						
acaaagatga	accatttctt	atatttatagc	aaaattaaaa	tctacccgta	ttctaataatt	60
gagaaatgag	atnaaacaca	atntttataaa	gtctacttag	agaagatcaa	gtgacctcaa	120
agacttttact	attttcatat	tttaagacac	atgattttatc	ctatttttagt	aacctgggttc	180
atacgttaaa	caaaggataa	tgtgaacagc	agagaggatt	tgttggcaga	aaatctatgt	240
tcaatctnga	actatctana	tcacagacat	ttctatttctt	tt		282

BNSDOCID: <WO___0004149A2_I_>

<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> (1)...(305)
<223> n = A,T,C or G

<400> 117
acacatgtcg cttcactgcc ttcttagatg cttctgggtca acatanagga acagggacca 60
tatttatcct ccctcctgaa acaattgcaa aataanacaa aatatatgaa acaattgcaa 120
aataaggcaa aatatatgaa acaacagggtc tgcgatatatt ggaaatcagt caatgaagga 180
tactgatccc tgatcactgt cctaattgcag gatgtgggaa acagatgagg tcacctctgt 240
gactgccccca gcttactgcc tgtagagagt ttctangctg cagttcagac agggagaaat 300
tgggt 305

<210> 118
<211> 71
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> (1)...(71)
<223> n = A,T,C or G

<400> 118
accaaggtgt ntgaatctct gacgtgggga tctctgattc ccgcacaatc tgagtggaaa 60
aantcctggg t 71

<210> 119
<211> 212
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> (1)...(212)
<223> n = A,T,C or G

<400> 119
actccggttg gtgtcagcag cacgtggcat tgaacatngc aatgtggagc ccaaaccaca 60
gaaaatgggg tgaaattggc caactttcta tnaacttatg ttggcaantt tgccaccaac 120
agtaagctgg cccttctaataaaaagaaaat tgaaagggtt ctcactaanc ggaattaant 180
aatggantca aganactccc aggcctcagc gt 212

<210> 120
<211> 90
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> (1)...(90)
<223> n = A,T,C or G

<400> 120

```
actcgttgca natcaggggc cccccagagt caccgttgca ggagtccttc tgggtcttgcc 60
ctccgccggc gcagaacatg ctgggggtgt 90
```

<210> 121

<211> 218

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(218)

<223> n = A,T,C or G

<400> 121

```
tgtancgtga anacgacaga nagggttgct aaaaatggag aanccttgaa gtcattttga 60
gaataagatt tgctaaaaga tttggggcta aaacatgggt attgggagac atttctgaag 120
atatncangt aaattangga atgaattcat gggtcttttg ggaattcctt tacgatngcc 180
agcatanact tcatgtgggg atancagcta cccttgta 218
```

<210> 122

<211> 171

<212> DNA

<213> Homo sapien

<400> 122

```
taggggtgta tgcaactgta aggacaaaaa ttgagactca actggcttaa ccaataaagg 60
catttgtag ctcatggaac aggaagtcgg atgggtggggc atcttcagtg ctgcatgagt 120
caccaccccg gcgggggtcat ctgtgccaca ggtccctgtt gacagtgcgg t 171
```

<210> 123

<211> 76

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(76)

<223> n = A,T,C or G

<400> 123

```
tgtagcgtga agacnacaga atgggtgtgtg ctgtgctatc caggaacaca tttattatca 60
ttatcaanta ttgtgt 76
```

<210> 124

<211> 131

<212> DNA

<213> Homo sapien

<400> 124

```
acctttcccc aaggccaatg tcctgtgtgc taactggccg gctgcaggac agctgcaatt 60
caatgtgctg ggtcatatgg aggggaggag actctaaaaat agccaatttt atttctctgg 120
ttaagatttg t 131
```

<210> 125
<211> 432
<212> DNA
<213> Homo sapien

<400> 125
actttatcta ctggctatga aatagatggt ggaaaattgc gttaccaact ataccactgg 60
cttgaaaaag aggtgatagc tcttcagagg acttgatgact tttgctcaga tgctgaagaa 120
ctacagtctg catttggcag aaatgaagat gaatttggat taaatgagga tgctgaagat 180
ttgcctcacc aaacaaaagt gaaacaactg agagaaaatt ttcaggaaaa aagacagtgg 240
ctcttgaagt atcagtcact tttgagaatg tttcttagtt actgcatact tcatggatcc 300
catggtgggg gtcttgcacg tgtaagaatg gaattgattt tgcttttgca agaattctcag 360
caggaaacat cagaaccact attttctagc cctctgtcag agcaaacctc agtgcccttc 420
ctctttgctt gt 432

<210> 126
<211> 112
<212> DNA
<213> Homo sapien

<400> 126
acacaacttg aatagtaaaa tagaaactga gctgaaatct ctaattcact ttctaaccat 60
agtaagaatg atatttcccc ccagggatca ccaaatatct ataaaaatct gt 112

<210> 127
<211> 54
<212> DNA
<213> Homo sapien

<400> 127
accacgaaac cacaacaag atggaagcat caatccactt gccaaagcaca gcag 54

<210> 128
<211> 323
<212> DNA
<213> Homo sapien

<400> 128
acctcattag taattgtttt gttgtttcat ttttttctaa tgtctccctt ctaccagctc 60
acctgagata acagaatgaa aatggaagga cagccagatt tctcctttgc tctctgctca 120
ttctctctga agtctaggtt acccattttg gggaccatt ataggcaata aacacagttc 180
ccaaagcatt tggacagttt ctgtgtgtgt tttagaatgg ttttcctttt tcttagcctt 240
ttcctgcaaa aggtcactc agtcctttgc ttgctcagtg gactgggctc cccagggcct 300
aggctgcctt cttttccatg tcc 323

<210> 129
<211> 192
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> (1) ... (192)
<223> n = A,T,C or G

<400> 129

acatacatgt	gtgtatat	ttttaa	atatca	ctttt	gtatc	actct	gactt	tttag	catac	60		
tgaaaacaca	ctaacata	aat	ttnt	gtgaac	catgat	caga	tacaac	cccaa	atcatt	catc	120	
tagcacat	tc	atct	gtgata	naaag	atagg	tgag	tttcat	ttcct	tcacg	ttggcca	atg	180
gataaacaaa	gt										192	

<210> 130

<211> 362

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(362)

<223> n = A,T,C or G

<400> 130

ccctttttta	tggaatgagt	agactgtatg	tttgaanatt	tanccacaac	ctctttgaca	60	
tataatgacg	caacaaaaag	gtgctgttta	gtcctatggg	tcagtttatg	cccctgacaa	120	
gtttccattg	tgttttgccg	atcttctggc	taatcgtggg	atcctccatg	ttattagtaa	180	
ttctgtat	tc	cattttgtta	acgcctggta	gatgtaacct	gctangaggc	taactttata	240
cttattttaa	agctcttatt	ttgtgggtcat	taaaatggca	atttatgtgc	agcactttat	300	
tgcagcagga	agcacgtgtg	ggttgggtgt	aaagctcttt	gctaattcta	aaaagtaatg	360	
gg						362	

<210> 131

<211> 332

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(332)

<223> n = A,T,C or G

<400> 131

ctttttgaaa	gatcgtgtcc	actcctgtgg	acatcttggt	ttaatggagt	ttcccatgca	60	
gtangactgg	tatggttgca	gctgtccaga	taaaaacatt	tgaagagctc	caaaatgaga	120	
gttctcccag	gttcgccctg	ctgctccaag	tctcagcagc	agcctctttt	aggaggcatc	180	
ttctgaacta	gattaaggca	gcttgtaa	at	ctgatgtgat	ttggtttatt	atccaactaa	240
cttccatctg	ttatcactgg	agaaagccca	gactccccan	gacnggtacg	gattgtgggc	300	
atanaaggat	tgggtgaagc	tggcggtgtg	gt			332	

<210> 132

<211> 322

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(322)

<223> n = A,T,C or G

<400> 132

acttttgcca	ttttgtatat	ataaacaatc	ttgggacatt	ctcctgaaaa	ctaggtgtcc	60
------------	------------	------------	------------	------------	------------	----

agtggttaag	agaactcgat	ttcaagcaat	tctgaaagga	aaaccagcat	gacacagaat	120
ctcaaattcc	caaacagggg	ctctgtggga	aaaatgaggg	aggaccttg	tatctcgggt	180
tttagcaagt	taaaatgaan	atgacaggaa	aggcttattt	atcaacaaag	agaagagttg	240
ggatgcttct	aaaaaaaaact	ttggtagaga	aataggaat	gctnaatcct	agggaagcct	300
gtaacaatct	acaattgggtc	ca				322

<210> 133
 <211> 278
 <212> DNA
 <213> Homo sapien

 <220>
 <221> misc_feature
 <222> (1) ... (278)
 <223> n = A,T,C or G

<400> 133						
acaagccttc	acaagtttaa	ctaaattggg	attaatcttt	ctgtanttat	ctgcataatt	60
cttggttttc	tttccatctg	gctcctgggt	tgacaatttg	tggaacaac	tctattgcta	120
ctatttataa	aaaatcacia	atctttccct	ttaagctatg	ttnaattcaa	actattcctg	180
ctattcctgt	tttgtcaaag	aaattatatt	tttcaaaaata	tgtntatttg	tttgatgggt	240
cccacgaac	actaataaaa	accacagaga	ccagcctg			278

<210> 134
 <211> 121
 <212> DNA
 <213> Homo sapien

 <220>
 <221> misc_feature
 <222> (1) ... (121)
 <223> n = A,T,C or G

<400> 134						
gtttanaaaa	cttgtttagc	tccatagagg	aaagaatggt	aaactttgta	ttttaaaca	60
tgattctctg	agggttaaact	tggttttcaa	atgttatatt	tacttgatt	ttgcttttgg	120
t						121

<210> 135
 <211> 350
 <212> DNA
 <213> Homo sapien

 <220>
 <221> misc_feature
 <222> (1) ... (350)
 <223> n = A,T,C or G

<400> 135						
acttanaacc	atgcctagca	catcagaatc	cctcaaagaa	catcagtata	atcctataacc	60
atancaagtg	gtgactgggt	aagcgtgcga	caaaggctcag	ctggcacatt	acttggtgtc	120
aaacttgata	cttttgttct	aagtaggaac	tagtatacag	tncctaggan	tggtactcca	180
gggtgcccc	caactcctgc	agccgctcct	ctgtgccagn	ccctgnaagg	aactttcgct	240
ccacctcaat	caagccctgg	gccatgctac	ctgcaattgg	ctgaacaaac	gtttgctgag	300
ttcccaagga	tgcaaagcct	ggtgctcaac	tcctggggcg	tcaactcagt		350

<210> 136
 <211> 399
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(399)
 <223> n = A,T,C or G

<400> 136
 tgtaccgtga agacgacaga agttgcatgg cagggacagg gcagggccga ggccagggtt 60
 gctgtgattg tatccgaata ntccctcgtga gaaaagataa tgagatgacg tgagcagcct 120
 gcagacttgt gtctgccttc aanaagccag acaggaaggc cctgcctgcc ttggctctga 180
 cctggcgggc agccagccag ccacaggtgg gcttcttctt tttgtggtga caacnccaag 240
 aaaactgcag aggcccaggg tcaggtgtna gtgggtangt gaccataaaa caccaggtgc 300
 tcccaggaac ccgggcaaag gccatcccca cctacagcca gcatgcccac tggcgtgatg 360
 ggtgcagang gatgaagcag ccagntgttc tgctgtggt 399

<210> 137
 <211> 165
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(165)
 <223> n = A,T,C or G

<400> 137
 actggtgtgg tnggggggtga tgctggtggt anaagttgan gtgacttcan gatggtgtgt 60
 ggaggaagtg tgtgaacgta gggatgtaga ngttttggcc gtgctaaatg agcttcggga 120
 ttggctggtc ccaactggtgg tcaactgtcat tgggtggggtt cctgt 165

<210> 138
 <211> 338
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(338)
 <223> n = A,T,C or G

<400> 138
 actcactgga atgccacatt cacaacagaa tcagaggtct gtgaaaacat taatggctcc 60
 ttaacttctc cagtaagaat cagggacttg aaatggaaac gttaacagcc acatgcccaa 120
 tgctgggcag tctcccatgc cttccacagt gaaagggctt gagaaaaatc acatccaatg 180
 tcatgtgttt ccagccacac caaaaggtgc ttgggggtgga gggctggggg catananggt 240
 cangcctcag gaagcctcaa gttccattca gctttgccac tgtacattcc ccatntttaa 300
 aaaaactgat gccttttttt tttttttttg taaaattc 338

<210> 139
 <211> 382

<212> DNA

<213> Homo sapien

<400> 139

```

gggaatcttg gtttttggca tctgggttgc ctatagccga ggccactttg acagaacaaa      60
gaaagggact tcgagtaaga aggtgattta cagccagcct agtgcccga gtgaaggaga      120
attcaaacag acctcgatcat tcttggtgtg agcctggtcg gctcaccgcc tatcatctgc      180
atttgcccta ctcaggtgct accggactct ggccccgat gtctgtagtt tcacaggatg      240
ccttattttgt cttctacacc ccacagggcc ccttacttct tcggatgtgt ttttaataat      300
gtcagctatg tgccccatcc tccttcatgc cctccctccc tttcctacca ctgctgagtg      360
gcctggaact tgttttaaagt gt                                     382

```

<210> 140

<211> 200

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1) ... (200)

<223> n = A,T,C or G

<400> 140

```

accaaanctt ctttctgttg tgttngattt tactataggg gtttngcttn ttctaaanat      60
acttttcatt taacancctt tgtaagtgt caggctgcac ttgctccat anaattattg      120
ttttcacatt tcaacttgta tgtgtttgtc tcttanagca ttggtgaaat cacatatttt      180
atattcagca taaaggagaa                                     200

```

<210> 141

<211> 335

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1) ... (335)

<223> n = A,T,C or G

<400> 141

```

actttatttt caaaacactc atatgttgca aaaaacacat agaaaaataa agtttggtgg      60
gggtgctgac taaacttcaa gtcacagact tttatgtgac agattggagc agggtttgtt      120
atgcatgtag agaaccctaaa ctaatttatt aaacaggata gaaacaggct gtctgggtga      180
aatggttctg agaaccatcc aattcacctg tcagatgctg atanactagc tcttcagatg      240
tttttctacc agttcagaga tnggttaatg actanttcca atggggaaaa agcaagatgg      300
attcacaac caagtaattt taaacaaaga cactt                                     335

```

<210> 142

<211> 459

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1) ... (459)

<223> n = A,T,C or G

<400> 142

accagggttaa	tattgccaca	tatatccttt	ccaattgcgg	gctaaacaga	cgtgtattta	60
gggttggtta	aagacaaccc	agcttaatat	caagagaaat	tgtgaccttt	catggagtat	120
ctgatggaga	aaacactgag	ttttgacaaa	tcttatttta	ttcagatagc	agtctgatca	180
cacatgggtcc	aacaacactc	aaataataaa	tcaaatatna	tcagatgtta	aagattggtc	240
ttcaaacatc	atagccaatg	atgccccgct	tgcctataat	ctctccgaca	taaaaccaca	300
tcaacacctc	agtggccacc	aaaccattca	gcacagcttc	cttaactgtg	agctgtttga	360
agctaccagt	ctgagcacta	ttgactatnt	ttttcangct	ctgaatagct	ctagggatct	420
cagcanggggt	gggaggaacc	agctcaacct	tggcgtant			459

<210> 143

<211> 140

<212> DNA

<213> Homo sapien

<400> 143

acatttcctt	ccaccaagtc	aggactcctg	gcttctgtgg	gagttcttat	cacctgaggg	60
aaatccaaac	agtctctcct	agaaaggaat	agtgtcacca	acccaccca	tctccctgag	120
accatccgac	tccctgtgt					140

<210> 144

<211> 164

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1) ... (164)

<223> n = A,T,C or G

<400> 144

acttcagtaa	caacatacaa	taacaacatt	aagtgtatat	tgccatcttt	gtcattttct	60
atctatacca	ctctcccttc	tgaaaacaan	aatcactanc	caatcactta	tacaaatttg	120
aggcaattaa	tccatatttg	ttttcaataa	ggaaaaaaag	atgt		164

<210> 145

<211> 303

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1) ... (303)

<223> n = A,T,C or G

<400> 145

acgtagacca	tccaactttg	tatttgtaat	ggcaaacatc	cagnagcaat	tcctaaacaa	60
actggaggggt	atttataccc	aattatccca	ttcattaaca	tgccctcctc	ctcagggtat	120
gcaggacagc	tatcataagt	cggcccaggc	atccagatac	taccatttgt	ataaacttca	180
gtagggggagt	ccatccaagt	gacagggtcta	atcaaaggag	gaaatggaac	ataagcccag	240
tagtaaaatn	ttgcttagct	gaaacagcca	caaaagactt	accgccgtgg	tgattaccat	300
caa						303

<210> 146

<211> 327
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(327)
 <223> n = A,T,C or G

<400> 146

actgcagctc aattagaagt ggtctctgac tttcatcanc ttctccctgg gctccatgac	60
actggcctgg agtgactcat tgctctgggt gggtgagaga gctcctttgc caacaggcct	120
ccaagtcagg gctgggattt gtttcctttc cacattctag caacaatatg ctggccactt	180
cctgaacagg gaggggtggga ggagccagca tgggaacaagc tgccactttc taaagtagcc	240
agacttgccc ctgggcctgt cacacctact gatgaccttc tgtgcctgca ggatggaatg	300
taggggtgag ctgtgtgact ctatgggt	327

<210> 147
 <211> 173
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(173)
 <223> n = A,T,C or G

<400> 147

acattgtttt tttgagataa agcattgana gagctctcct taacgtgaca caatggaagg	60
actggaacac ataccacat ctttgttctg agggataatt ttctgataaa gtcttgctgt	120
atattcaagc acatatgtta tatattattc agttccatgt ttatagccta gtt	173

<210> 148
 <211> 477
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(477)
 <223> n = A,T,C or G

<400> 148

acaaccactt tatctcatcg aatttttaac ccaaactcac tcactgtgcc tttctatcct	60
atgggatata ttatttgatg ctccatttca tcacacatat atgaataata cactcatact	120
gccctactac ctgctgcaat aatcacattc ccttcctgtc ctgaccctga agccattggg	180
gtggctctag tggccatcag tccangcctg caccttgagc ccttgagctc cattgtcac	240
nccancccac ctcaccgacc ccatcctctt acacagctac ctccttgctc tctaacccca	300
tagattatnt ccaaattcag tcaattaagt tactattaac actctaccg acatgtccag	360
caccactggg aagccttctc cagccaacac acacacacac acacncacac acacacatat	420
ccaggcacag gctacctcat cttcacaatc acccctttaa ttaccatgct atgggtgg	477

<210> 149
 <211> 207
 <212> DNA

<213> Homo sapien

<400> 149

acagttgtat tataatatca agaaataaac ttgcaatgag agcattttaag agggaagaac	60
taacgtatatt tagagagcca aggaaggttt ctgtggggag tgggatgtaa ggtggggcct	120
gatgataaat aagagtcagc caggtaagtg ggtggtgtgg tatgggcaca gtgaagaaca	180
tttcaggcag agggaacagc agtgaaa	207

<210> 150

<211> 111

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(111)

<223> n = A,T,C or G

<400> 150

accttgattt cattgctgct ctgatggaaa cccaactatc taatttagct aaaacatggg	60
cacttaaattg tggtcagtgt ttggacttgt taactantgg catctttggg t	111

<210> 151

<211> 196

<212> DNA

<213> Homo sapien

<400> 151

agcgcggcag gtcattattga acattccaga tacctatcat tactcgatgc tgttgataac	60
agcaagatgg ctttgaactc agggtcacca ccagctattg gaccttacta tgaaaaccat	120
ggataccaac cggaaaaccc ctatcccga cagcccactg tggccccac tgtctacgag	180
gtgcatccgg ctacgt	196

<210> 152

<211> 132

<212> DNA

<213> Homo sapien

<400> 152

acagcacttt cacatgtaag aaggagagaaa ttcctaaatg taggagaaaag ataacagaac	60
cttccccttt tcatctagtg gtggaaacct gatgctttat gttgacagga atagaaccag	120
gaggagattt gt	132

<210> 153

<211> 285

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(285)

<223> n = A,T,C or G

<400> 153

acaanaccca nganaggcca ctggccgtgg tgtcatggcc tccaaacatg aaagtgtcag	60
---	----

```

cttctgctct tatgtcctca tctgacaact ctttaccatt tttatcctcg ctcagcagga      120
gcacatcaat aaagtccaaa gtcttggaact tggccttggc ttggaggaag tcatcaacac      180
cctggctagt gaggtgctgg cgccgtcctt ggatgacggc atctgtgaag tcgtgcacca      240
gtctgcaggc cctgtggaag cgccgtccac acggagtnag gaatt                        285

```

<210> 154

<211> 333

<212> DNA

<213> Homo sapien

<400> 154

```

accacagtcc tgttggggcca gggcttcatg accctttctg tgaaaagcca tattatcacc      60
accccaaatt tttccttaaa tatctttaac tgaaggggtc agcctcttga ctgcaaagac      120
cctaagccgg ttacacagct aactcccact ggccctgatt tgtgaaattg ctgctgcctg      180
attggcacag gagtcgaagg tggtcagctc cctctctcgg tggaaacgaga ctctgatttg      240
agtttcacaa attctcgggc cacctcgtca ttgctcctct gaaataaaat ccggagaatg      300
gtcaggcctg tctcatccat atggatcttc cgg                                           333

```

<210> 155

<211> 308

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(308)

<223> n = A,T,C or G

<400> 155

```

actggaaata ataaaaccca catcacagtg ttgtgtcaaa gatcatcagg gcatggatgg      60
gaaagtgtct tgggaactgt aaagtgccta acacatgatc gatgattttt gttataatat      120
ttgaatcacg gtgcatacaa actctcctgc ctgctcctcc tgggccccag cccagcccc      180
atcacagctc actgctctgt tcatccaggc ccagcatgta gtggctgatt cttcttggct      240
gcttttagcc tccanaagtt tctctgaagc caaccaaacc tctangtgta aggcattgtg      300
gccttggt                                           308

```

<210> 156

<211> 295

<212> DNA

<213> Homo sapien

<400> 156

```

accttgctcg gtgcttgga catattagga actcaaaata tgagatgata acagtgccta      60
ttattgatta ctgagagaac tgtagacat ttagttgaag attttctaca caggaactga      120
gaataggaga ttatgtttgg cctcatatt ctctcctatc ctccctgcct cattctatgt      180
ctaatatatt ctcaatcaaa taaggtttagc ataatcagga aatcgaccaa ataccaatat      240
aaaaccagat gtctatcctt aagattttca aatagaaaac aaattaacag actat          295

```

<210> 157

<211> 126

<212> DNA

<213> Homo sapien

<400> 157

```

acaagtttaa atagtgtgt cactgtgcat gtgctgaaat gtgaaatcca ccacatttct      60

```

gaagagcaaa acaaattctg tcatgtaatc tctatcttgg gtcgtgggta tatctgtccc 120
cttagt 126

<210> 158
<211> 442
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> (1) ... (442)
<223> n = A,T,C or G

<400> 158
accactgggt cttggaaaca cccatcctta atacgatgat ttttctgtcg tgtgaaaatg 60
aanccagcag gctgccccta gtcagtcctt ccttccagag aaaaagagat ttgagaaagt 120
gcctgggtaa ttcaccatta atttcctccc ccaaactctc tgagtcttcc cttaatatgt 180
ctggtgggtc tgaccaaagc aggtcatggg ttgttgagca tttgggatcc cagtgaagta 240
natgtttgta gccttgcata cttagccctt cccacgcaca aacggagtgg cagagtgggtg 300
ccaaccctgt tttcccagtc cacgtagaca gattcacagt gcggaattct ggaagctgga 360
nacagacggg ctctttgcag agccgggact ctgagangga catgagggcc tctgcctctg 420
tgttcattct ctgatgtcct gt 442

<210> 159
<211> 498
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> (1) ... (498)
<223> n = A,T,C or G

<400> 159
acttccaggt aacgttggtg tttccgttga gcctgaactg atgggtgacg ttgtaggttc 60
tccaacaaga actgaggttg cagagcgggt aggggaagagt gctgttccag ttgcacctgg 120
gctgctgtgg actgttggtg attcctcact acggcccaag gttgtggaac tggcanaaag 180
gtgtgtgtgt gganttgagc tcgggcgggt gtggttaggtt gtgggtctct caacaggggc 240
tgctgtgggt ccgggangtg aangtggtgt gtcacttgag cttggccagc tctggaaagt 300
antanattct tcctgaaggc cagcgcttgt ggagctggca ngggtcantg ttgtgtgtaa 360
cgaaccagtg ctgctgtggg tgggtgtana tcctccacaa agcctgaagt tatggtgtcn 420
tcaggttaana atgtggtttc agtgtccctg ggcngctgtg gaaggttgta nattgtcacc 480
aagggaataa gctgtggt 498

<210> 160
<211> 380
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> (1) ... (380)
<223> n = A,T,C or G

<400> 160

```

acctgcatcc agcttccctg ccaaactcac aaggagacat caacctctag acagggaaac      60
agcttcagga tacttccagg agacagagcc accagcagca aaacaaatat tcccatgcct      120
ggagcatggc atagaggaag ctganaaatg tggggctctga ggaagccatt tgagtctggc      180
cactagacat ctcatcagcc acttgtgtga agagatgccc catgacccca gatgcctctc      240
ccacccttac ctccatctca cacacttgag ctttccactc tgtataattc taacatcctg      300
gagaaaaatg gcagtttgac cgaacctgtt cacaacggta gaggctgatt tctaacgaaa      360
ctgtagaat  gaagcctgga                                     380

```

```

<210> 161
<211> 114
<212> DNA
<213> Homo sapien

```

```

<400> 161
actccacatc cctctgagc aggcgggtgt cgttcaaggt gtatttgccc ttgcctgtca      60
cactgtccac tggccctta tccacttggt gcttaatccc tcgaaagagc atgt          114

```

```

<210> 162
<211> 177
<212> DNA
<213> Homo sapien

```

```

<400> 162
actttctgaa tcgaatcaaa tgatacttag tgtagtttta atatcctcat atatatcaaa      60
gttttactac tctgataatt ttgtaaacca ggtaaccaga acatccagtc atacagcttt      120
tggtgatata taacttggca ataaccagtc ctggtgatac ataaaactac tcactgt       177

```

```

<210> 163
<211> 137
<212> DNA
<213> Homo sapien

```

```

<220>
<221> misc_feature
<222> (1)...(137)
<223> n = A,T,C or G

```

```

<400> 163
catttatata gacaggcgtg aagacattca cgacaaaaac gcgaaattct atcccgtgac      60
canagaaggc agctacggct actcctacat cctggcgtgg gtggccttcg cctgcacctt      120
catcagcggc atgatgt                                     137

```

```

<210> 164
<211> 469
<212> DNA
<213> Homo sapien

```

```

<220>
<221> misc_feature
<222> (1)...(469)
<223> n = A,T,C or G

```

```

<400> 164
cttatcacia tgaatgttct cctgggcagc gttgtgatct ttgccacctt cgtgacttta      60
tgcaatgcat catgctatct catacctaat gagggagttc caggagattc aaccaggaaa      120

```

tgcattggatc	tcaaaggaaa	caaacaccca	ataaaactcg	agtggcagac	tgacaactgt	180
gagacatgca	cttgctacga	aacagaaatt	tcatgttgca	cccttgtttc	tacacctgtg	240
ggttatgaca	aagacaactg	ccaaagaatc	ttcaagaagg	aggactgcaa	gtatatcgtg	300
gtggagaaga	aggacccaaa	aaagacctgt	tctgtcagtg	aatggataat	ctaattgtgct	360
tctagtaggc	acagggctcc	caggccaggc	ctcattctcc	tctggcctct	aatagtcatt	420
gattgtgtag	ccatgcctat	cagtaaaaag	atntttgagc	aaacacttt		469

<210> 165

<211> 195

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(195)

<223> n = A,T,C or G

<400> 165

acagtttttt	atanatatcg	acattgccgg	cacttggtgt	cagtttcata	aagctgggtg	60
atccgctgtc	atccactatt	ccttggttag	agtaaaaatt	attcttatag	cccatgtccc	120
tgcaggccgc	ccgcccgtag	ttctcgttcc	agtcgtcttg	gcacacaggg	tgccaggact	180
tcctctgaga	tgagt					195

<210> 166

<211> 383

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(383)

<223> n = A,T,C or G

<400> 166

acatcttagt	agtgtggcac	atcagggggc	catcagggtc	acagtcactc	atagcctcgc	60
cgaggctgga	gtccacacca	ccggtgtagg	tgtgctcaat	cttgggcttg	gcgcccacct	120
ttggagaagg	gatatgctgc	acacacatgt	ccacaaagcc	tgtgaactcg	ccaaagaatt	180
tttgagacc	agcctgagca	aggggcggat	gttcagcttc	agctcctcct	tcgtcagggtg	240
gatgccaacc	tcgtctangg	tccgtgggaa	gctgggtgtc	acntcaccta	caacctgggc	300
gangatctta	taaagaggct	ccnagataaa	ctccacgaaa	cttctctggg	agctgctagt	360
nggggccttt	ttggtgaact	ttc				383

<210> 167

<211> 247

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(247)

<223> n = A,T,C or G

<400> 167

acagagccag	accttggcca	taaatgaanc	agagattaag	actaaacccc	aagtoganat	60
tggagcagaa	actggagcaa	gaagtgggcc	tggggctgaa	gtagagacca	aggccactgc	120

tatanccata cacagagcca actctcagge caaggcnatg gttggggcag anccagagac	180
tcaatctgan tccaaagtgg tggctggaac actggctcatg acanaggcag tgactctgac	240
tgangtc	247

<210> 168
 <211> 273
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(273)
 <223> n = A,T,C or G

<400> 168	
acttctaagt tttctagaag tggaaggatt gtantcatcc tgaaaatggg tttacttcaa	60
aatccctcan ccttggtctt cacnactgtc tatactgana gtgtcatggt tccacaaaagg	120
gctgacacct gagcctgnat tttcactcat ccctgagaag ccctttccag taggggtgggc	180
aattcccaac ttcccttgcca caagcttccc aggcctttctc ccctggaaaa ctccagcttg	240
agtcccagat acactcatgg gctgccctgg gca	273

<210> 169
 <211> 431
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(431)
 <223> n = A,T,C or G

<400> 169	
acagccttgg cttccccaaa ctccacagtc tcagtgcaga aagatcatct tccagcagtc	60
agctcagacc aggggtcaaag gatgtgacat caacagtttc tggtttcaga acaggttcta	120
ctactgtcaa atgaccccc atacttcctc aaaggctgtg gtaagttttg cacaggtgag	180
ggcagcagaa aggggggtant tactgatgga caccatcttc tctgtatact ccacactgac	240
cttgccatgg gcaaaggccc ctaccacaaa aacaatagga tcaactgctgg gcaccagctc	300
acgcacatca ctgacaaccg ggatggaaaa agaantgcca actttcatac atccaactgg	360
aaagtgatct gatactggat tcttaattac cttcaaaaagc ttctgggggc catcagctgc	420
tcgaacactg a	431

<210> 170
 <211> 266
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(266)
 <223> n = A,T,C or G

<400> 170	
acctgtgggc tgggctgtta tgccctgtgcc ggctgctgaa agggagttca gaggtggagc	60
tcaaggagct ctgcaggcat tttgccaanct ctctccanag canagggagc aacctacact	120
ccccgctaga aagacaccag attggagtc tgggaggggg agttgggggtg ggcatttgat	180

gtatacttgt cacctgaatg aangagccag agaggaanga gacgaanatg anattggcct 240
tcaaagctag gggctctggca ggtgga 266

<210> 171

<211> 1248

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1) ... (1248)

<223> n = A,T,C or G

<400> 171

```

ggcagccaaa tcataaacgg cgaggactgc agcccgcaact cgcagccctg gcaggcggca      60
ctggtcatgg aaaacgaatt gttctgctcg ggcgtcctgg tgcacccgca gtgggtgctg      120
tcagccgcac actgtttcca gaagtgaagt cagagctcct acaccatcgg gctgggcctg      180
cacagtcttg aggccgacca agagccaggg agccagatgg tggaggccag cctctccgta      240
cggcacccag agtacaacag acccttgctc gctaacgacc tcatgctcat caagttggac      300
gaatccgtgt ccgagtctga caccatccgg agcatcagca ttgcttcgca gtgccctacc      360
gcggggaaact cttgcctcgt ttctggctgg ggtctgctgg cgaacggcag aatgcctacc      420
gtgctgcagt gcgtgaacgt gtcggtggtg tctgaggagg tctgcagtaa gctctatgac      480
ccgctgtacc accccagcat gttctgcgcc ggcggaggggc aagaccagaa ggactcctgc      540
aacggtgact ctggggggcc cctgatctgc aacgggtact tgcagggcct tgtgtctttc      600
ggaaaagccc cgtgtggcca agttggcgtg ccagggtgtct acaccaacct ctgcaaattc      660
actgagtgga tagagaaaac cgtccaggcc agttaactct ggggactggg aacctatgaa      720
attgaccccc aaatacatcc tgcggaagga attcaggaat atctgttccc agccccctct      780
ccctcaggcc caggagtcca ggccccccagc ccctcctccc tcaaaccaag ggtacagatc      840
cccagcccct cctccctcag acccaggagt ccagaccccc cagccccctcc tccctcagac      900
ccaggagtcc agccccctct ccctcagacc caggagtcca gacccccccag cccctcctcc      960
ctcagacca ggggtccagg cccccaaccc ctccctccctc agactcagag gtccaagccc     1020
ccaaccntc attcccaga cccagaggtc cagggtcccag cccctcntcc ctcagaccca     1080
gcggtccaat gccacctaga cntccctgt acacagtgcc cccttgtggc acgttgacct     1140
aaccttacca gttggttttt catttttngt ccctttcccc tagatccaga aataaagttt     1200
aagagaagng caaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaa     1248

```

<210> 172

<211> 159

<212> PRT

<213> Homo sapien

<220>

<221> VARIANT

<222> (1) ... (159)

<223> Xaa = Any Amino Acid

<400> 172

```

Met Val Glu Ala Ser Leu Ser Val Arg His Pro Glu Tyr Asn Arg Pro
 1              5              10              15
Leu Leu Ala Asn Asp Leu Met Leu Ile Lys Leu Asp Glu Ser Val Ser
              20              25              30
Glu Ser Asp Thr Ile Arg Ser Ile Ser Ile Ala Ser Gln Cys Pro Thr
              35              40              45
Ala Gly Asn Ser Cys Leu Val Ser Gly Trp Gly Leu Leu Ala Asn Gly
50              55              60

```

```

Arg Met Pro Thr Val Leu Gln Cys Val Asn Val Ser Val Val Ser Glu
65              70              75              80
Glu Val Cys Ser Lys Leu Tyr Asp Pro Leu Tyr His Pro Ser Met Phe
              85              90              95
Cys Ala Gly Gly Gly Gln Xaa Gln Xaa Asp Ser Cys Asn Gly Asp Ser
              100             105             110
Gly Gly Pro Leu Ile Cys Asn Gly Tyr Leu Gln Gly Leu Val Ser Phe
              115             120             125
Gly Lys Ala Pro Cys Gly Gln Val Gly Val Pro Gly Val Tyr Thr Asn
              130             135             140
Leu Cys Lys Phe Thr Glu Trp Ile Glu Lys Thr Val Gln Ala Ser
145              150              155

```

```

<210> 173
<211> 1265
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> (1)...(1265)
<223> n = A,T,C or G

```

```

<400> 173
ggcagcccgcc actcgagccc ctggcaggcg gcactgggtca tggaaaacga attgttctgc      60
tcggggcgccc tgggtgcatcc gcagtgggtg ctgtcagccg cacactgttt ccagaactcc      120
tacaccatcg ggctgggcctt gcacagtctt gagggccgacc aagagccagg gagccagatg      180
gtggaggcca gcctctccgt acggcaccca gagtacaaca gacccttgct cgctaacgac      240
ctcatgctca tcaagttgga cgaatccgtg tccgagtctg acaccatccg gagcatcagc      300
attgcttcgc agtgccctac cgcggggaac tcttgccctg tttctggctg gggctctgctg      360
gcgaacgggtg agctcacggg tgtgtgtctg ccctcttcaa ggaggctctc tgcccagtcg      420
cgggggctga cccagagctc tgcgtcccag gcagaatgcc taccgtgctg cagtgcgtga      480
acgtgtcggt ggtgtctgag gaggtctgca gtaagctcta tgaccgctg taccacccca      540
gcatgttctg cggcggcgga gggcaagacc agaaggactc ctgcaacggg gactctgggg      600
ggccccctgat ctgcaacggg tacttgaggg gccttgtgtc tttcggaaaa gccccgtgtg      660
gccaaagttgg cgtgccagggt gtctacacca acctctgcaa attcactgag tggatagaga      720
aaaccgtcca ggccagttaa ctctggggac tgggaaccca tgaaattgac ccccaaatac      780
atcctgcgga aggaattcag gaatatctgt tcccagcccc tcctccctca ggcccaggag      840
tccaggcccc cagcccctcc tccctcaaac caagggtaca gateccccagc ccctcctccc      900
tcagacccag gagtccagac cccccagccc ctctcctcct agaccagga gtccagcccc      960
tcctccntca gaccagggag tccagacccc ccagcccctc ctccctcaga cccagggggt      1020
gaggccccca acccctcctc cttcagagtc agagggtcaa gcccccaacc cctcgttccc      1080
cagacccaga ggtnnaggtc ccagcccctc ttcctcaga cccagnggtc caatgccacc      1140
tagattttcc ctgnacacag tgcccccttg tgganagttg acccaacctt accagttggt      1200
ttttcatttt tngtcccttt cccctagatc cagaaataaa gtttaagaga ngngcaaaaa      1260
aaaaa                                           1265

```

```

<210> 174
<211> 1459
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> (1)...(1459)

```

<223> n = A,T,C or G

<400> 174

ggtcagccgc	acactgtttc	cagaagtgcg	tgcagagctc	ctacaccatc	gggctggggc	60
tgcacagtct	tgaggccgac	caagagccag	ggagccagat	ggtggaggcc	agcctctccg	120
tacggcaccc	agagtacaac	agacccttgc	tcgctaacga	cctcatgctc	atcaagttgg	180
acgaatccgt	gtccgagtct	gacaccatcc	ggagcatcag	cattgcttcg	cagtgcctta	240
ccgcggggaa	ctcttgccct	gtttctggct	ggggtctgct	ggcgaacggt	gagctcacgg	300
gtgtgtgtct	gccctcttca	aggagggtct	ctgcccagtc	gcgggggctg	acccagagct	360
ctgcgtccca	ggcagaatgc	ctaccgtgct	gcagtgcgtg	aacgtgtcgg	tggtgtctga	420
ngaggctctgc	antaagctct	atgaccgcgt	gtaccacccc	ancatgttct	gcgccggcgg	480
agggcaagac	cagaaggact	cctgcaacgt	gagagagggg	aaaggggagg	gcaggcgact	540
caggggaagg	tggagaaggg	ggagacagag	acacacaggg	ccgcatggcg	agatgcagag	600
atggagagac	acacagggag	acagtgacaa	ctagagagag	aaactgagag	aaacagagaa	660
ataaacacag	gaataaagag	aagcaaagga	agagagaaac	agaaacagac	atggggaggc	720
agaaacacac	acacatagaa	atgcagttga	ccttccaaca	gcatggggcc	tgaggcggtg	780
gacctccacc	caatagaaaa	tcctcttata	acttttgact	ccccaaaaac	ctgactagaa	840
atagcctact	gttgacgggg	agccttacca	ataacataaa	tagtcgattt	atgcatacgt	900
tttatgcatt	catgatatac	ctttgttgga	attttttgat	atttctaagc	tacacagttc	960
gtctgtgaat	ttttttaaat	tgttgcaact	ctcctaaaat	ttttctgatg	tgtttattga	1020
aaaaatccaa	gtataagtgg	acttgtgcat	tcaaaccagg	gttgttcaag	ggtcaactgt	1080
gtacccagag	ggaaacagtg	acacagattc	atagaggtga	aacacgaaga	gaaacaggaa	1140
aaatcaagac	tctacaaaga	ggctgggcag	ggtgggtcat	gcctgtaate	ccagcacttt	1200
gggaggcgag	gcaggcgagat	cacttgaggt	aaggagttca	agaccagcct	ggccaaaatg	1260
gtgaaatcct	gtctgtacta	aaaatacaaa	agttagctgg	atatgggtgg	aggcgctgtg	1320
aatcccagct	acttgggagg	ctgaggcgag	agaattgctt	gaatatggga	ggcagaggtt	1380
gaagtgcgtt	gagatcacac	cactatactc	cagctggggc	aacagagtaa	gactctgtct	1440
caaaaaaaaa	aaaaaaaaaa					1459

<210> 175

<211> 1167

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1) ... (1167)

<223> n = A,T,C or G

<400> 175

gcgcagccct	ggcaggcggc	actggctcatg	gaaaacgaat	tggtctgctc	gggcgtcctg	60
gtgcatccgc	agtgggtgct	gtcagccgca	cactgtttcc	agaactccta	caccatcggg	120
ctgggcctgc	acagtcttga	ggccgaccaa	gagccaggga	gccagatggt	ggaggccagc	180
ctctccgtac	ggcaccacga	gtacaacaga	ctcttgctcg	ctaacgacct	catgctcatc	240
aagttggacg	aatccgtgtc	cgagtctgac	accatccgga	gcatcagcat	tgcttcgcag	300
tgccctaccg	cgggggaactc	ttgcctcgtg	tctggctggg	gtctgctggc	gaacggcaga	360
atgcctaccg	tgctgcactg	cgtgaacgtg	tcgggtggtg	ctgaggangt	ctgcagtaag	420
ctctatgacc	cgtgtgacca	ccccagcatg	ttctgcgccg	gcggaggggc	agaccagaag	480
gactcctgca	acggtgactc	tgggggggccc	ctgatctgca	acgggtactt	gcagggcctt	540
gtgtctttcg	gaaaagcccc	gtgtggccaa	cttggcgtgc	caggtgtcta	caccaacctc	600
tgcaaattca	ctgagtggat	agagaaaacc	gtccagncca	gttaactctg	gggactggga	660
acccatgaaa	ttgaccccaa	aatacatcct	gcggaangaa	ttcaggaata	tctgttccca	720
gcccctcctc	cctcaggccc	aggagtccag	gccccagcc	cctcctccct	caaaccaagg	780
gtacagatcc	ccagcccctc	ctccctcaga	cccaggagtc	cagacccccc	agcccctcnt	840
ccntcagacc	caggagtcca	gcccctcctc	cntcagacgc	aggagtccag	accccccagc	900

```

ccntcntccg tcagacccag ggggtgcaggc cccaacccc tcntccntca gagtcagagg      960
tccaagcccc caacccctcg ttccccagac ccagaggtnc aggtcccagc cctcctccc      1020
tcagacccag cgggtccaatg ccacctagan tntccctgta cacagtggcc ccttggtggca      1080
ngttgaccca accttaccag ttgggttttc atttttgtc cctttccct agatccagaa      1140
ataaagtnta agagaagcgc aaaaaaa      1167

```

<210> 176

<211> 205

<212> PRT

<213> Homo sapien

<220>

<221> VARIANT

<222> (1)...(205)

<223> Xaa = Any Amino Acid

<400> 176

```

Met Glu Asn Glu Leu Phe Cys Ser Gly Val Leu Val His Pro Gln Trp
 1      5      10      15
Val Leu Ser Ala Ala His Cys Phe Gln Asn Ser Tyr Thr Ile Gly Leu
 20      25      30
Gly Leu His Ser Leu Glu Ala Asp Gln Glu Pro Gly Ser Gln Met Val
 35      40      45
Glu Ala Ser Leu Ser Val Arg His Pro Glu Tyr Asn Arg Leu Leu Leu
 50      55      60
Ala Asn Asp Leu Met Leu Ile Lys Leu Asp Glu Ser Val Ser Glu Ser
 65      70      75      80
Asp Thr Ile Arg Ser Ile Ser Ile Ala Ser Gln Cys Pro Thr Ala Gly
 85      90      95
Asn Ser Cys Leu Val Ser Gly Trp Gly Leu Leu Ala Asn Gly Arg Met
 100     105     110
Pro Thr Val Leu His Cys Val Asn Val Ser Val Val Ser Glu Xaa Val
 115     120     125
Cys Ser Lys Leu Tyr Asp Pro Leu Tyr His Pro Ser Met Phe Cys Ala
 130     135     140
Gly Gly Gly Gln Asp Gln Lys Asp Ser Cys Asn Gly Asp Ser Gly Gly
 145     150     155     160
Pro Leu Ile Cys Asn Gly Tyr Leu Gln Gly Leu Val Ser Phe Gly Lys
 165     170     175
Ala Pro Cys Gly Gln Leu Gly Val Pro Gly Val Tyr Thr Asn Leu Cys
 180     185     190
Lys Phe Thr Glu Trp Ile Glu Lys Thr Val Gln Xaa Ser
 195     200     205

```

<210> 177

<211> 1119

<212> DNA

<213> Homo sapien

<400> 177

```

gcgcactcgc agccctggca ggcggcactg gtcattgaaa acgaattgtt ctgctcgggc      60
gtcctggtgc atccgcagtg ggtgctgtca gccgcacact gtttccagaa ctctacacc      120
atcgggctgg gcctgcacag tcttgaggcc gaccaagagc cagggagcca gatggtggag      180
gccagcctct ccgtacggca cccagagtac aacagaccct tgctcgctaa cgacctcatg      240
ctcatcaagt tggacgaatc cgtgtccgag tctgacacca tccggagcat cagcattgct      300

```

```

tcgcagtgcc ctaccgcggg gaactcttgc ctcgtttctg gctggggtct gctggcgaac 360
gatgctgtga ttgccatcca gtcccagact gtgggaggct gggagtgtga gaagctttcc 420
caaccctggc aggggtgtac catttcggca acttccagtg caaggacgtc ctgctgcatc 480
ctcactgggt gctcactact gctcactgca tcaccgcgaa cactgtgatc aactagccag 540
caccatagtt ctccgaagtc agactatcat gattactgtg ttgactgtgc tgtctattgt 600
actaaccatg ccgatgttta ggtgaaatta gcgtcacttg gcctcaacca tcttggtatc 660
cagttatcct cactgaattg agatttcctg cttcagtgtc agccattccc acataatttc 720
tgacctacag aggtgagggg tcatatagct cttcaaggat gctgggtactc cctcacaaaa 780
ttcattttctc ctgtttagt gaaagggtgc cctctggag cctcccaggg tgggtgtgca 840
ggtcacaatg atgaatgtat gatcgtgttc ccattaccca aagcctttaa atccctcatg 900
ctcagtacac cagggcaggt ctagcatttc ttcathtagt gtatgctgtc cattcatgca 960
accacctcag gactcctgga ttctctgcct agttgagctc ctgcatgctg cctccttggg 1020
gaggtgaggg agagggccca tggttcaatg ggatctgtgc agttgtaaca cattaggtgc 1080
ttaataaaca gaagctgtga tgttaaaaaa aaaaaaaaaa 1119

```

<210> 178

<211> 164

<212> PRT

<213> Homo sapien

<220>

<221> VARIANT

<222> (1) ... (164)

<223> Xaa = Any Amino Acid

<400> 178

```

Met Glu Asn Glu Leu Phe Cys Ser Gly Val Leu Val His Pro Gln Trp
 1          5          10          15
Val Leu Ser Ala Ala His Cys Phe Gln Asn Ser Tyr Thr Ile Gly Leu
          20          25          30
Gly Leu His Ser Leu Glu Ala Asp Gln Glu Pro Gly Ser Gln Met Val
          35          40          45
Glu Ala Ser Leu Ser Val Arg His Pro Glu Tyr Asn Arg Pro Leu Leu
          50          55          60
Ala Asn Asp Leu Met Leu Ile Lys Leu Asp Glu Ser Val Ser Glu Ser
          65          70          75          80
Asp Thr Ile Arg Ser Ile Ser Ile Ala Ser Gln Cys Pro Thr Ala Gly
          85          90          95
Asn Ser Cys Leu Val Ser Gly Trp Gly Leu Leu Ala Asn Asp Ala Val
          100          105          110
Ile Ala Ile Gln Ser Xaa Thr Val Gly Gly Trp Glu Cys Glu Lys Leu
          115          120          125
Ser Gln Pro Trp Gln Gly Cys Thr Ile Ser Ala Thr Ser Ser Ala Arg
          130          135          140
Thr Ser Cys Cys Ile Leu Thr Gly Cys Ser Leu Leu Leu Thr Ala Ser
          145          150          155          160
Pro Gly Thr Leu

```

<210> 179

<211> 250

<212> DNA

<213> Homo sapien

<400> 179

ctggagtgcc	ttggtgtttc	aagccccctgc	aggaagcaga	atgcaccttc	tgaggcacct	60
ccagctgccc	ccggccgggg	gatgcgaggc	tcggagcacc	cttgcccggc	tgtgattgct	120
gccaggcact	gttcatctca	gcttttctgt	ccctttgctc	ccggcaagcg	cttctgctga	180
aagttcatat	ctggagcctg	atgtcttaac	gaataaaggt	cccatgctcc	acccgaaaaa	240
aaaaaaaaaa						250

<210> 180

<211> 202

<212> DNA

<213> Homo sapien

<400> 180

actagtccag	tgtggtggaa	ttccattgtg	ttggggcccaa	cacaatggct	acctttaaca	60
tcacccagac	cccggcccctg	cccgtgcccc	acgtctgtgc	taacgacagt	atgatgctta	120
ctctgctact	cggaaactat	ttttatgtaa	ttaatgtatg	ctttcttggt	tataaatgcc	180
tgattttaaaa	aaaaaaaaaa	aa				202

<210> 181

<211> 558

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1) ... (558)

<223> n = A,T,C or G

<400> 181

tccytttgkt	naggtttkkg	agacamccck	agacctwaan	ctgtgtcaca	gacttcyngg	60
aatgttttagg	cagtgtctagt	aatttcytcg	taatgattct	gttattactt	tcctnattct	120
ttattcctct	ttcttctgaa	gattaatgaa	gttgaaaatt	gaggtggata	aatacaaaaa	180
ggtagtgatga	tagtataagt	atctaagtgc	agatgaaagt	gtgttatata	tatccattca	240
aaattatgca	agttagtaat	tactcagggt	taactaaatt	actttaatat	gctgttgaac	300
ctactctgtt	ccttggctag	aaaaaattat	aaacaggact	ttgttagttt	gggaagccaa	360
attgataata	ttctatgttc	taaaagttgg	gctatacata	aattattaag	aaatatggaw	420
ttttattccc	aggaatatgg	kgttcatttt	atgaatatta	cscrpggatag	awgtwtgagt	480
aaaaycagtt	ttggtwaata	ygtwaatatg	tcmtaaataa	acaakgcttt	gacttatttc	540
caaaaaaaaa	aaaaaaaaa					558

<210> 182

<211> 479

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1) ... (479)

<223> n = A,T,C or G

<400> 182

acagggwttk	grggatgcta	agsecccrga	rwtygtttga	tccaaccctg	gcttwttttc	60
agaggggaaa	atggggccta	gaagttacag	mecatytagy	tggtgcgmtg	gcacccctgg	120
cstcacacag	astcccagag	agctgggact	acaggcacac	agtcactgaa	gcaggccctg	180
ttwgcaattc	acgttgccac	ctccaactta	aacattcttc	atatgtgatg	tccttagtca	240
ctaagggttaa	actttcccac	ccagaaaagg	caacttagat	aaaatcttag	agtactttca	300

tactmttcta	agtcctcttc	cagcctcact	kkgagtcctm	cytggggggtt	gataggaant	360
ntctcttggc	tttctcaata	aartctctat	ycatctcatg	tttaatttgg	tacgcataara	420
awtgstgara	aaattaaaaat	gttctgggty	macttttaaaa	aaaaaaaaaa	aaaaaaaaaa	479

<210> 183

<211> 384

<212> DNA

<213> Homo sapien

<400> 183

aggcgggagc	agaagctaaa	gccaaagccc	aagaagagt	gcagtgccag	cactgggtgcc	60
agtaccagta	ccaataacag	tgccagtgcc	agtgccagca	ccagtgggtg	cttcagtgtc	120
ggtgccagcc	tgaccgccac	tctcacattt	gggctcttcg	ctggccttgg	tggagctggt	180
gccagcacca	gtggcagctc	tggtgcctgt	ggtttctcct	acaagtgaga	ttttagatat	240
tgtaaatcct	gccagtcttt	ctcttcaagc	cagggtgcat	cctcagaaac	ctactcaaca	300
cagcactcta	ggcagccact	atcaatcaat	tgaagttgac	actctgcatt	aratctattt	360
gccatttcaa	aaaaaaaaaa	aaaa				384

<210> 184

<211> 496

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1) ... (496)

<223> n = A,T,C or G

<400> 184

accgaattgg	gaccgctggc	ttataagcga	tcattgtynt	ccrgtatcac	ctcaacgagc	60
agggagatcg	agtctatacg	ctgaagaaat	ttgacccgat	gggacaacag	acctgctcag	120
cccatacctgc	tcggttctcc	ccagatgaca	aataactctsg	acaccgaatc	accatcaaga	180
aacgcttcaa	ggtgctcatg	accagcaaac	cgcgcctctg	cctctgaggg	tcccttaaac	240
tgatgtcttt	tctgccacct	gttacccttc	ggagactccg	taaccaaact	cttcggactg	300
tgagccctga	tgcttttttg	ccagccatac	tctttggcat	ccagtctctc	gtggcgattg	360
attatgcttg	tgtgaggcaa	tcattggtggc	atcacccata	aagggaacac	atttgacttt	420
tttttctcat	attttaaatt	actacmagaw	tattwmagaw	waaatgawtt	gaaaaactst	480
taaaaaaaaa	aaaaaa					496

<210> 185

<211> 384

<212> DNA

<213> Homo sapien

<400> 185

gctggtagcc	tatggcgkgg	cccacggagg	ggctcctgag	gccacggrac	agtgacttcc	60
caagtatcyt	gcgcsgcgtc	ttctaccgtc	cctacctgca	gatcttcggg	cagattcccc	120
aggaggacat	ggacgtggcc	ctcatggagc	acagcaactg	ytctgctggg	cccggcttct	180
gggcacaccc	tcctggggcc	caggcgggca	cctgcgtctc	ccagtatgcc	aactggctgg	240
tggtgctgct	cctcgtcatc	ttcctgctcg	tggccaacat	cctgctggtc	aacttgctca	300
ttgccatgtt	cagttacaca	ttcggcaaag	tacagggcaa	cagcgatctc	tactgggaag	360
gcgcagcgtt	accgcctcat	ccgg				384

<210> 186

<211> 577

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1) ... (577)

<223> n = A,T,C or G

<400> 186

gagttagctc	ctccacaacc	ttgatgaggt	cgtctgcagt	ggcctctcgc	ttcataccgc	60
tnccatcgtc	atactgtagg	tttgccacca	cytcctggca	tcttggggcg	gcntaatatt	120
ccaggaaact	ctcaatcaag	tcaccgtcga	tgaaacctgt	gggctgggtc	tgtcttccgc	180
tcgggtgtgaa	aggatctccc	agaaggagtg	ctcgatcttc	cccacacttt	tgatgacttt	240
attgagtcga	ttctgcatgt	ccagcaggag	gttgtaggag	ctctctgaca	gtgagggtcac	300
cagccctatc	atgccgttga	mcgtgccgaa	garcaccgag	ccttgtgtgg	gggkkgaaagt	360
ctcaccacaga	ttctgcatta	ccagagagcc	gtggcaaaaag	acattgacaa	actcgcccag	420
gtggaaaaaag	amcamctcct	ggargtgctn	gccgctcctc	gtcmgttggt	ggcagcgctw	480
tccttttgac	acacaaacaa	gttaaaggca	ttttcagccc	ccagaaantt	gtcatcatcc	540
aagatntcgc	acagcactna	tccagttggg	attaaat			577

<210> 187

<211> 534

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1) ... (534)

<223> n = A,T,C or G

<400> 187

aacatcttcc	tgtataatgc	tgtgtaatat	cgatccgatn	ttgtctgstg	agaatycatw	60
actkggaaaa	gmaacattaa	agcctggaca	ctgggtattaa	aattcacaat	atgcaacact	120
ttaaacagtg	tgtcaatctg	ctcccynac	tttgtcatca	ccagtctggg	aakaagggtta	180
tgccctattc	acacctgtta	aaagggcgct	aagcattttt	gattcaacat	cttttttttt	240
gacacaagtc	cgaaaaaagc	aaaagtaaag	agttatyaat	ttgttagcca	attcactttc	300
ttcatgggac	agagccatyt	gatttaaaaa	gcaaattgca	taatattgag	cttyggggagc	360
tgatatttga	gcggaagagt	agcctttcta	cttcaccaga	cacaactccc	tttcatattg	420
ggatgttnac	naaagtwatg	tctctwacag	atgggatgct	tttgtggcaa	ttctgttctg	480
aggatctccc	agttttattta	ccacttgcac	aagaaggcgt	tttcttcctc	aggc	534

<210> 188

<211> 761

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1) ... (761)

<223> n = A,T,C or G

<400> 188

agaaaccagt	atctctnaaa	acaacctctc	ataccttggt	gacctaat	ttgtgtgcgtg	60
ttgtgtgtgcg	cgcataattat	atagacaggc	acatcttttt	tacttttgta	aaagcttatg	120
cctctttgggt	atctatatct	gtgaaagttt	taatgatctg	ccataatgtc	ctggggacct	180

```

ttgtcttctg tgtaaatggt actagagaaa acacctatnt tatgagtcaa tctagttngt      240
tttattcgac atgaaggaaa ttccagatn acaacactna caaactctcc ctkgackarg      300
ggggacaaaag aaaagcaaaa ctgamcataa raaacaatwa cctggtgaga arttgcataa      360
acagaaatwr ggtagtatat tgaarnacag catcattaaa rmgttwtktt wttctccctt      420
gcaaaaaaca tgtacngact tcccgttgag taatgccaaag ttgttttttt tatnataaaa      480
cttgcccttc attacatggt tnaaagtggg gtggtggggc aaaatattga aatgatggaa      540
ctgactgata aagctgtaca aataagcagt gtgcctaaca agcaacacag taatgttgac      600
atgcttaatt cacaaatgct aatttcatta taaatgtttg ctaaaatata ctttgaacta      660
tttttctgtt tcccagagc tgagatntta gattttatgt agtatnaagt gaaaaantac      720
gaaaataata acattgaaga aaaananaaa aanaaaaaaa a                                761

```

<210> 189

<211> 482

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1) ... (482)

<223> n = A,T,C or G

<400> 189

```

tttttttttt ttgcccgatn ctactatttt attgcaggan gtgggggtgt atgcaccgca      60
caccgggggt atnagaagca agaaggaagg agggagggca cagccccttg ctgagcaaca      120
aagccgcctg ctgccttctc tgtctgtctc ctggtgcagg cacatgggga gaccttcccc      180
aaggcagggg ccaccagtcg aggggtggga atacaggggg tgggangtgt gcataagaag      240
tgataggcac agggcaccgg gtacagaccc ctcggtcctt gacaggtnga ttctgaccag      300
gtcattgtgc cctgcccagg cacagcgtna atctggaaaa gacagaatgc ttcccttttc      360
aaatttggct ngtcatngaa ngggcanttt tccaanttng gctnggtctt ggtacncttg      420
gttcgggcca gtcncnctc caaaaantat tcaccnntt ccnaattgct tgcnggnccc      480
cc                                482

```

<210> 190

<211> 471

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1) ... (471)

<223> n = A,T,C or G

<400> 190

```

tttttttttt ttttaaaaca gtttttcaca acaaaattta ttagaagaat agtgggttttg      60
aaaactctcg catccagtga gaactaccat acaccacatt acagctngga atgtntctca      120
aatgtctggt caaatgatac aatggaacca ttcaatctta cacatgcacg aaagaacaag      180
cgcttttgac atacaatgca caaaaaaaaaa aggggggggg gaccacatgg attaaaattt      240
taagtactca tcacatacat taagacacag ttctagtcca gtcnaaaatc agaactgcnt      300
tgaaaaattt catgtatgca atccaaccaa agaacttnat tggatgatcat gantnctcta      360
ctacatcnac cttgatcatt gccaggaacn aaaagttnaa ancacncngt acaaaaaanaa      420
tctgtaattt anttcaacct ccgtacngaa aaatnttntt tatacactcc c                                471

```

<210> 191

<211> 402

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1) ... (402)

<223> n = A,T,C or G

<400> 191

gagggattga aggtctgttc tastgtcggm ctgttcagcc accaactcta acaagttgct	60
gtcttccact cactgtctgt aagcttttta acccagacwg tatcttcata aatagaacaa	120
attcttcacc agtcacatct tctaggacct ttttggattc agttagtata agctcttcca	180
cttcctttgt taagacttca tctggtaaag tcttaagttt tgtagaaagg aattyaattg	240
ctcgttctct aacaatgtcc tctccttgaa gtatttggct gaacaaccca cctaaagtcc	300
ctttgtgcat ccattttaaa tatacttaat agggcattgk tncactaggt taaattctgc	360
aagagtcacg tgtctgcaaa agttgcgtta gtatatctgc ca	402

<210> 192

<211> 601

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1) ... (601)

<223> n = A,T,C or G

<400> 192

gagctcggat ccaataatct ttgtctgagg gcagcacaca tatncagtgc catggnaact	60
ggtctacccc acatggggagc agcatgccgt agntatataa ggtcattccc tgagtcagac	120
atgcytyttt gaytaccgtg tgccaagtgc tgggtgattct yaacacacyt ccattcccgt	180
cttttgtgga aaaactggca cttktctgga actagcarga catcacttac aaattcaccc	240
acgagacact tgaaagggtg aacaaagcga ytcttgcatg gctttttgtc cctccggcac	300
cagttgtcaa tactaaccgg ctggtttgcc tccatcacat ttgtgatctg tagctctgga	360
tacatctcct gacagtactg aagaacttct tcttttgttt caaaagcarg tcttgggtgcc	420
tggtggatca ggttcccatt tcccagtcyg aatgttcaca tggcatattt wacttccac	480
aaaacattgc gatttgaggc tcagcaacag caaatcctgt tccggcattg gctgcaagag	540
cctcgatgta gccggccagc gccaaaggcag gcgccgtgag cccaccagc agcagaagca	600
g	601

<210> 193

<211> 608

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1) ... (608)

<223> n = A,T,C or G

<400> 193

atacagccca natcccacca cgaagatgcg cttgttgact gagaacctga tgcggtcact	60
ggctcccgctg tagccccagc gactctccac ctgctggaag cggttgatgc tgcactcytt	120
cccaacgcag gcagmagcgg gscgggtcaa tgaactccay tcgtggcttg gggtkgacgg	180
tkaagtgcag gaagaggctg accacctcgc ggtccaccag gatgcccagc tgtgcgggac	240
ctgcagcgaa actcctcgat ggcatgagc ggggaagcgaa tgaggcccag ggccttgccc	300

```

agaaccttcc gectgttctc tggcgtcacc tgcagctgct gccgctgaca ctccggcctcg      360
gaccagcgga caaacggcrt tgaacagccg cacctcacgg atgcccagtg tgtcgcgctc      420
caggammgsc accagcgtgt ccagggtcaat gtcgggtgaag ccctccgcgg gtratggcgt      480
ctgcagtgtt tttgtcgatg ttctccaggc acaggctggc cagctgcggt tcatcgaaga      540
gtcgcgcctg cgtgagcagc atgaaggcgt tgtcggctcg cagttcttct tcaggaactc      600
cacgcaat                                         608

```

<210> 194

<211> 392

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(392)

<223> n = A,T,C or G

<400> 194

```

gaacggctgg accttgccctc gcattgtgct tgctggcagg gaataccttg gcaagcagyt      60
ccagtccgag cagccccaga ccgctgccgc ccgaagctaa gcctgcctct ggccttcccc      120
tccgcctcaa tgcagaacca gtagtgggag cactgtgttt agagttaaga gtgaacactg      180
tttgatttta cttgggaatt tcctctgtta tatagctttt cccaatgcta atttccaaac      240
aacaacaaca aaataacatg ttgcctgtt aagttgtata aaagtaggtg attctgtatt      300
taaagaaaaa attactgtta catatactgc ttgcaatttc tgtatttatt gktnctstgg      360
aaataaatat agttattaaa ggttgtcant cc                                         392

```

<210> 195

<211> 502

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(502)

<223> n = A,T,C or G

<400> 195

```

ccsttkgagg ggtkaggkyc cagttyccga gtggaagaaa caggccagga gaagtgcgtg      60
ccgagctgag gcagatgttc ccacagtgcac cccagagacc stgggstata gtytctgacc      120
cctcncaagg aaagaccacs ttctggggac atgggctgga gggcaggacc tagaggcacc      180
aaggggaaggc cccattccgg ggstgttccc cgaggaggaa ggggaaggggc tctgtgtgcc      240
ccccasgagg aagaggccct gagtcctggg atcagacacc ctttcacgtg tatccccaca      300
caaatgcaag ctcaccaagg tcccctctca gtccccttcc stacacctg amcggccact      360
gscscacacc caccagagc acgccacccg ccatggggar tgtgtcaag gartcgcnng      420
gcarcgtgga catctngtcc cagaaggggg cagaatctcc aatagangga ctgarcmstt      480
gctnanaaaa aaaaanaaaa aa                                         502

```

<210> 196

<211> 665

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(665)

<223> n = A,T,C or G

<400> 196

ggttacttgg	tttcattgcc	accacttagt	ggatgtcatt	tagaaccatt	ttgtctgctc	60
cctctggaag	ccttgcgcag	agcggacttt	gtaattgttg	gagaataact	gctgaatttt	120
wagctgtttk	gagttgatts	gcaccaactgc	accacaact	tcaatatgaa	aacyawttga	180
actwatttat	tatcttgtga	aaagtataac	aatgaaaatt	ttgttcatac	tgtattkac	240
aagtatgatg	aaaagcaawa	gatatatatt	cttttattat	gttaaattat	gattgccatt	300
attaatcggc	aaaatgtgga	gtgtatgttc	ttttcacagt	aatatatgcc	ttttgtaact	360
tcacttgggt	attttattgt	aaatgartta	caaaattctt	aatttaagar	aatgggatgt	420
watattttatt	tcattaattt	ctttcctkgt	ttacgtwaat	tttgaaaaga	wtgcatgatt	480
tcttgacaga	aatcgatctt	gatgctgtgg	aagtagtttg	accacatcc	ctatgagttt	540
ttcttagaat	gtataaaggt	tgtagcccat	cnaacttcaa	agaaaaaat	gaccacatac	600
tttgcaatca	ggctgaaatg	tggcatgctn	ttctaattcc	aactttataa	actagcaaan	660
aagtg						665

<210> 197

<211> 492

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(492)

<223> n = A,T,C or G

<400> 197

ttttnttttt	ttttttttgc	aggaaggatt	ccattttattg	tggatgcatt	ttcacaatat	60
atgttttattg	gagcgatcca	ttatcagtga	aaagtatcaa	gtgtttataa	nattttttagg	120
aaggcagatt	cacagaacat	gctngtcngc	ttgcagtttt	acctcgtana	gatnacagag	180
aatttatagtc	naaccagtaa	acnaggaatt	tactttttcaa	aagattaaat	ccaaactgaa	240
caaaatttcta	ccctgaaact	tactccatcc	aaatattgga	ataanagtca	gcagtgatac	300
attctcttct	gaacttttaga	ttttctagaa	aaatatgtaa	tagtgatcag	gaagagctct	360
tgttcaaaag	tacaacnaag	caatgttccc	ttaccatagg	ccttaattca	aactttgatc	420
catttcactc	ccatcacggg	agtcaatgct	acctgggaca	cttgtatttt	gttcatnctg	480
ancntggctt	aa					492

<210> 198

<211> 478

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(478)

<223> n = A,T,C or G

<400> 198

tttnttttgn	atttcantct	gtannaanta	ttttcattat	gtttattana	aaaatatnaa	60
tgtntccacn	acaaatcatn	ttacntnagt	aagaggccan	ctacattgta	caacatacac	120
tgagtatat	ttgaaaagga	caagttttaa	gtanacncat	attgccganc	atancacatt	180
tatacatggc	ttgattgata	tttagcacag	canaaactga	gtgagttacc	agaaanaaat	240
nataatgtgc	aatcngattt	aagatacaaa	acagatccta	tggtacatan	catcntgtag	300
gagttgtggc	tttatgttta	ctgaaagtca	atgcagttcc	tgtacaaaga	gatggccgta	360
agcattctag	tacctctact	ccatgggttaa	gaatcgta	cttatgttta	catatgtnc	420

gggtaagaat tgtgttaagt naanttatgg agagggtccan gagaaaaatt tgatncaa 478

<210> 199
 <211> 482
 <212> DNA
 <213> Homo sapien
 <220>
 <221> misc_feature
 <222> (1)...(482)
 <223> n = A,T,C or G

<400> 199
 agtgacttgt cctccaacaa aaccccttga tcaagtttgt ggcaactgaca atcagaccta 60
 tgctagttcc tgtcatctat tcgctactaa atgcagactg gagggggacca aaaaggggca 120
 tcaactccag ctggattatt ttggagcctg caaatctatt cctacttgta cggactttga 180
 agtgattcag tttcctctac ggatgagaga ctggctcaag aatatacctca tgcagcttta 240
 tgaagccnac tctgaacacg ctggttatct nagatgagaa ncagagaaat aaagtcnaga 300
 aaattttacct ggangaaaag aggccttngg ctggggacca tcccattgaa ccttctctta 360
 anggacttta agaanaaact accacatgtn tgtngtatcc tgggtgccngg ccgtttantg 420
 aacntngacn ncacccttnt ggaatanant cttgacngcn tcctgaactt gtcctctctgc 480
 ga 482

<210> 200
 <211> 270
 <212> DNA
 <213> Homo sapien
 <220>
 <221> misc_feature
 <222> (1)...(270)
 <223> n = A,T,C or G

<400> 200
 cggccgcaag tgcaactcca gctggggccg tgcggacgaa gattctgcca gcagttggtc 60
 cgactgcgac gacggcgccg gcgacagtcg caggtgcagc gcggggcgct ggggtcttgc 120
 aaggctgagc tgacgccgca gaggtcgtgt cacgtcccac gaccttgacg ccgtcgggga 180
 cagccggaac agagcccggt gaangcggga ggcctcgggg agcccctcgg gaagggcggc 240
 ccgagagata cgcaggtgca ggtggccgcc 270

<210> 201
 <211> 419
 <212> DNA
 <213> Homo sapien
 <220>
 <221> misc_feature
 <222> (1)...(419)
 <223> n = A,T,C or G

<400> 201
 tttttttttt ttttgaatc tactgcgagc acagcaggtc agcaacaagt ttattttgca 60
 gctagcaagg taacagggta gggcatggtt acatgttcag gtcaacttcc tttgtcgtgg 120
 ttgattggtt tgtctttatg ggggcggggg ggggtagggg aaancgaagc anaantaaca 180
 tggagtgggt gcaccctccc tgtagaacct gggttacnaaa gcttggggga gttcacctgg 240

tctgtgaccg	tcattttctt	gacatcaatg	ttattagaag	tcaggatata	ttttagagag	300
tccactgtnt	ctggagggag	attagggttt	cttgccaana	tccaancaaa	atccacntga	360
aaaagttgga	tgatncangt	acngaatacc	ganggcatan	ttctcatant	cgggtggcca	419

<210> 202

<211> 509

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(509)

<223> n = A,T,C or G

<400> 202

tttntttttt	tttttttttt	tttttttttt	tttttttttt	tttttttttt	tttttttttt	60
tggcacttaa	tccattttta	tttcaaaatg	tctacaaant	ttnaatncnc	cattatacng	120
gtnattttnc	aaaatctaaa	nntttattcaa	atntnagcca	aantccttac	ncaaatttnaa	180
tacnncnaaa	aatcaaaaaat	atacntntct	ttcagcaaac	ttngttacat	aaattaaaaa	240
aatatatacg	gctgggtgtt	tcaaagtaca	attatcttaa	cactgcaaac	atnttttnaa	300
ggaactaaaa	taaaaaaaaa	cactnccgca	aagggttaaag	ggaacaacaa	attcntttta	360
caacancnnc	nattataaaa	atcatatctc	aaatcttagg	ggaatatata	cttcacacng	420
ggatcttaac	ttttactnca	ctttgtttat	ttttttanaa	ccattgtntt	gggccaacaa	480
caatggnaat	nccnccnnc	tggtactagt				509

<210> 203

<211> 583

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(583)

<223> n = A,T,C or G

<400> 203

tttttttttt	ttttttttga	ccccctctt	ataaaaaaca	agttaccatt	ttattttact	60
tacacatatt	tattttataa	ttggtattag	atattcaaaa	ggcagctttt	aaaatcaaac	120
taaatggaaa	ctgccttaga	tacataattc	ttaggaatta	gcttaaaatc	tgcttaaagt	180
gaaaatcttc	tctagctctt	ttgactgtaa	atttttgact	cttgtaaaac	atccaaattc	240
atttttcttg	tctttaaaat	tatctaattc	ttccattttt	tccctattcc	aagtcaattt	300
gcttctctag	cctcatttcc	tagctcttat	ctactattag	taagtggctt	ttttcctaaa	360
agggaaaaca	ggaagagana	atggcacaca	aaacaaacat	tttatattca	tatttctacc	420
tacgttaata	aaatagcatt	ttgtgaagcc	agctcaaaaag	aagggttaga	tccttttatg	480
tccatttttag	tcactaaacg	atatacnaag	tgccagaatg	caaaagggtt	gtgaacattt	540
attcaaaagc	taatataaga	tatttcacat	actcatcttt	ctg		583

<210> 204

<211> 589

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(589)

<223> n = A,T,C or G

<400> 204

ttttttttnt	tttttttttt	tttttttctc	ttcttttttt	ttganaatga	ggatcgagtt	60
tttcaactct	tagatagggc	atgaagaaaa	ctcatctttc	cagcttttaa	ataacaatca	120
aatctcttat	gctatatcat	attttaagtt	aaactaatga	gtcactggct	tatcttctcc	180
tgaaggaaat	ctgttcattc	ttctcattca	tatagttata	tcaagtacta	ccttgcatat	240
tgagaggttt	ttcttctcta	tttacacata	tatttccatg	tgaatttgta	tcaaaccctt	300
attttcatgc	aaactagaaa	ataatgtntt	cttttgcata	agagaagaga	acaatatnag	360
cattacaaaa	ctgctcaaat	tgtttgtaa	gnttatccat	tataattagt	tnggcaggag	420
ctaatacaaa	tcacatttac	ngacnagcaa	taataaaaact	gaagtaccag	ttaaatatcc	480
aaaataatta	aaggaacatt	tttagcctgg	gtataattag	ctaattcact	ttacaagcat	540
ttattnagaa	tgaattcaca	tgttattatt	cnttagccca	acacaatgg		589

<210> 205

<211> 545

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1) ... (545)

<223> n = A,T,C or G

<400> 205

tttttntttt	ttttttcagt	aataatcaga	acaatattta	tttttatatt	taaaattcat	60
agaaaagtgc	cttacattta	ataaaagttt	gtttctcaaa	gtgatcagag	gaattagata	120
tngtcttgaa	caccaatatt	aatttgagga	aaatacacca	aaatacatta	agtaaattat	180
ttaagatcat	agagcttgta	agtgaaga	taaaatttga	cctcagaaac	tctgagcatt	240
aaaaatccac	tattagcaaa	taaattacta	tggacttctt	gctttaattt	tgtgatgaat	300
atgggggtgc	actggtaaac	caacacattc	tgaaggatac	attacttagt	gatagattct	360
tatgtacttt	gctanatnac	gtggatatga	gttgacaagt	ttctctttct	tcaatctttt	420
aaggggcnga	ngaaatgagg	aagaaaagaa	aaggattacg	catactgttc	tttctatngg	480
aaggattaga	tatgtttcct	ttgccaatat	taaaaaata	ataatgttta	ctactagtga	540
aaccc						545

<210> 206

<211> 487

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1) ... (487)

<223> n = A,T,C or G

<400> 206

tttttttttt	tttttttagtc	aagtttctna	tttttattat	aattaaagtc	ttgggtcattt	60
catttattag	ctctgcaact	tacatattta	aattaaagaa	acgttnttag	acaactgtna	120
caatttataa	atgtaagggtg	ccattattga	gtanatatat	tcctccaaga	gtggatgtgt	180
cccttctccc	accaactaat	gaancagcaa	cattagttta	attttattag	tagatnatac	240
actgctgcaa	acgctaattc	tcttctccat	ccccatgtng	atattgtgta	tatgtgtgag	300
ttggtnagaa	tgcatacanca	atctnacaat	caacagcaag	atgaagctag	gcntgggctt	360
tcggtgaaaa	tagactgtgt	ctgtctgaat	caaatgatct	gacctatcct	cgggtggcaag	420
aactcttcga	accgcttctt	caaaggcngc	tgccacattt	gtggcntctn	ttgcaattgt	480

ttcaaaa

487

<210> 207
 <211> 332
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(332)
 <223> n = A,T,C or G

<400> 207

tgaattggct	aaaagactgc	atTTTTanaa	ctagcaactc	ttattttcttt	cctttaaaaa	60
tacatagcat	taaatcccaa	atcctattta	aagacctgac	agcttgagaa	ggtcactact	120
gcatttatag	gaccttctgg	tggttctgct	gttacntttg	aantctgaca	atccttgana	180
atctttgcat	gcagaggagg	taaaagggtat	tggattttca	cagaggaana	acacagcgca	240
gaaatgaagg	ggccaggctt	actgagcttg	tccactggag	ggctcatggg	tgggacatgg	300
aaaagaaggc	agcctaggcc	ctggggagcc	ca			332

<210> 208
 <211> 524
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(524)
 <223> n = A,T,C or G

<400> 208

agggcggtggt	gcggaggggcg	ttactgtttt	gtctcagtaa	caataaatac	aaaaagactg	60
gttgtgttcc	ggccccatcc	aaccacgaag	ttgatttctc	ttgtgtgcag	agtgactgat	120
tttaaaggac	atggagcttg	tcacaatgtc	acaatgtcac	agtgtgaagg	gcacactcac	180
tcccgcgtga	ttcacattta	gcaaccaaca	atagctcatg	agtccatact	tgtaaatact	240
tttggcagaa	tacttnttga	aacttgacga	tgataactaa	gatccaagat	atttcccaaa	300
gtaaatagaa	gtgggtcata	atattaatta	cctgttcaca	tcagcttcca	tttacaagtc	360
atgagcccag	acactgacat	caaactaagc	ccacttagac	tcctcaccac	cagtctgtcc	420
tgtcatcaga	caggaggctg	tcaccttgac	caaattctca	ccagtcaatc	atctatccaa	480
aaaccattac	ctgatccact	tccggtaatg	caccaccttg	gtga		524

<210> 209
 <211> 159
 <212> DNA
 <213> Homo sapien

<400> 209

gggtgaggaa	atccagagtt	gccatggaga	aaattccagt	gtcagcattc	ttgtctcttg	60
tggccctctc	ctacactctg	gccagagata	ccacagtcaa	acctggagcc	aaaaaggaca	120
caaaggactc	tcgacccaaa	ctgccccaga	ccctctcca			159

<210> 210
 <211> 256
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(256)
 <223> n = A,T,C or G

<400> 210
 actccctggc agacaaaggc agaggagaga gctctgttag ttctgtgttg ttgaactgcc 60
 actgaatttc tttccacttg gactattaca tgccanttga gggactaatg gaaaaacgta 120
 tggggagatt ttanccaatt tangtntgta aatggggaga ctggggcagg cgggagagat 180
 ttgcagggtg naaatgggan ggctgggttg ttanatgaac agggacatag gaggtaggca 240
 ccaggatgct aaatca 256

<210> 211
 <211> 264
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(264)
 <223> n = A,T,C or G

<400> 211
 acattgtttt tttagataa agcattgaga gagctctcct taacgtgaca caatggaagg 60
 actggaacac ataccacat ctttgttctg agggataatt ttctgataaa gtcttgctgt 120
 atattcaagc acatatgtta tatattattc agttccatgt ttatagccta gttaaggaga 180
 ggggagatac attcngaaag aggactgaaa gaaatactca agtnggaaaa cagaaaaaga 240
 aaaaaaggag caaatgagaa gcct 264

<210> 212
 <211> 328
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(328)
 <223> n = A,T,C or G

<400> 212
 acccaaaaat ccaatgctga atatttggtc tcattattcc canattcttt gattgtcaaa 60
 ggatttaatg ttgtctcagc ttgggcactt cagttaggac ctaaggatgc cagccggcag 120
 gtttatatat gcagcaacaa tattcaagcg cgacaacagg ttattgaact tgcccgccag 180
 ttnaatttca ttccattga cttgggatcc ttatcatcag ccagagagat tgaaaattta 240
 ccctacnac tctttactct ctgganaggg ccagtgggtg tagctataag cttggccaca 300
 ttttttttct cttttattcct ttgtcaga 328

<210> 213
 <211> 250
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature

<222> (1)...(250)

<223> n = A,T,C or G

<400> 213

acttatgagc	agagcgacat	atccnagtgt	agactgaata	aaactgaatt	ctctccagtt	60
taaagcattg	ctcactgaag	ggatagaagt	gactgccagg	agggaaaagta	agccaaggct	120
cattatgcca	aagganatat	acattttcaat	tctccaaact	tcttcctcat	tccaagagtt	180
ttcaatattt	gcatgaacct	gctgataanc	catgttaana	aacaaatata	tctctnacct	240
tctcatcggt						250

<210> 214

<211> 444

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(444)

<223> n = A,T,C or G

<400> 214

acccagaatc	caatgctgaa	tatttggcctt	cattattccc	agattctttg	attgtcaaag	60
gatttaatgt	tgtctcagct	tgggcacttc	agttaggacc	taaggatgcc	agccggcagg	120
tttatatatg	cagcaacaat	attcaagcgc	gacaacaggt	tattgaactt	gcccgccagt	180
tgaatttcat	tcccattgac	ttgggatcct	tatcatcagc	canagagatt	gaaaattttac	240
ccctacgact	ctttactctc	tggagagggc	cagtgggtgg	agctataagc	ttggccacat	300
ttttttttcc	ttttttcctt	tgtcagagat	gcgattcatc	catatgctan	aaaccaacag	360
agtgactttt	acaaaattcc	tataganatt	gtgaataaaa	ccttacctat	agttgccatt	420
actttgctct	ccctaataata	cctc				444

<210> 215

<211> 366

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(366)

<223> n = A,T,C or G

<400> 215

acttatgagc	agagcgacat	atccaagtgt	anactgaata	aaactgaatt	ctctccagtt	60
taaagcattg	ctcactgaag	ggatagaagt	gactgccagg	agggaaaagta	agccaaggct	120
cattatgcca	aagganatat	acattttcaat	tctccaaact	tcttcctcat	tccaagagtt	180
ttcaatattt	gcatgaacct	gctgataagc	catgttgaga	aacaaatata	tctctgacct	240
tctcatcggt	aagcagaggc	tgtaggcaac	atggaccata	gcgaanaaaa	aacttagtaa	300
tccaagctgt	tttctacact	gtaaccaggt	ttccaaccaa	ggtggaaaatc	tcctatactt	360
ggtgcc						366

<210> 216

<211> 260

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature
 <222> (1)...(260)
 <223> n = A,T,C or G

<400> 216
 ctgtataaac agaactccac tgcangaggg agggccgggc caggagaatc tccgcttgtc 60
 caagacaggg gcctaaggag ggtctccaca ctgctnntaa gggctnttnc atttttttat 120
 taataaaaag tnnaaaaggc ctcttctcaa cttttttccc ttnggctgga aaatttaaaa 180
 atcaaaaatt tcctnaagtt ntcaagctat catatatact ntatcctgaa aaagcaacat 240
 aattcttctt tccctccttt 260

<210> 217
 <211> 262
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(262)
 <223> n = A,T,C or G

<400> 217
 acctacgtgg gtaagtttan aaatgttata atttcaggaa naggaacgca tataattgta 60
 tcttgccctat aatttttctat ttttaataagg aaatagcaaa ttgggggtggg gggaatgtag 120
 ggcattctac agtttgagca aaatgcaatt aaatgtggaa ggacagcact gaaaaatttt 180
 atgaataatc tgtatgatta tatgtctcta gagtagattt ataattagcc acttacccta 240
 atatccttca tgcttgtaaa gt 262

<210> 218
 <211> 205
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(205)
 <223> n = A,T,C or G

<400> 218
 accaaggtgg tgcattaccg gaantggatc aangacacca tcgtggccaa cccctgagca 60
 cccctatcaa ctcccctttg tagtaaaactt ggaaccttgg aaatgaccag gccaaagactc 120
 aggctcccc agttctactg acctttgtcc ttangtntna ngcccagggt tgctaggaaa 180
 anaaatcagc agacacaggt gtaaa 205

<210> 219
 <211> 114
 <212> DNA
 <213> Homo sapien

<400> 219
 tactgttttg tctcagtaac aataaatata aaaagactgg ttgtgttccg gccccatcca 60
 accacgaagt tgatttctct tgtgtgcaga gtgactgatt ttaaaggaca tggga 114

<210> 220
 <211> 93

<212> DNA

<213> Homo sapien

<400> 220

actagccagc acaaaaaggca gggtagcctg aattgctttc tgctctttac atttctttta 60
 aaataagcat ttagtgctca gtccttactg agt 93

<210> 221

<211> 167

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(167)

<223> n = A,T,C or G

<400> 221

actangtgca ggtgcgacaca aatatttgct gatattccct tcattcttga ttccatgagg 60
 tcttttgccc agcctgtggc tctactgtag taagtttctg ctgatgagga gccagnatgc 120
 cccccactac cttccctgac gctcccccana aatcacccaa cctctgt 167

<210> 222

<211> 351

<212> DNA

<213> Homo sapien

<400> 222

agggcggtggt gcggagggcg gtactgacct cattagtagg aggatgcatt ctggcacccc 60
 gttcttcacc tgtcccccaa tctttaaag gccatactgc ataaagtcaa caacagataa 120
 atgtttgctg aattaaagga tggatgaaaa aaattaataa tgaatttttg cataatccaa 180
 tttctctttt tatatttcta gaagaagttt ctttgagcct attagatccc gggaatcttt 240
 taggtgagca tgattagaga gcttgtaggt tgctttttaca tatatctggc atatttgagt 300
 ctcgtatcaa aacaatagat tggtaaaggt ggtattattg tattgataag t 351

<210> 223

<211> 383

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(383)

<223> n = A,T,C or G

<400> 223

aaaacaaaca acaaaaaaaaa acaattcttc attcagaaaa attatcttag ggactgatat 60
 tggtaattat ggtcaattta atwrtrttkt ggggcatttc cttacattgt cttgacaaga 120
 ttaaaatgtc tgtgccaaaa ttttgtattt tatttggaga cttcttatca aaagtaatgc 180
 tgccaaagga agtctaagga attagtagtg tccccmtcac ttgtttggag tgtgctattc 240
 taaaagattt tgatttcctg gaatgacaat tatattttta ctttgggtggg ggaaanagtt 300
 ataggaccac agtcttcact tctgatactt gtaaattaat cttttattgc acttgttttg 360
 accattaagc tatatgttta aaa 383

<210> 224

<211> 320

<212> DNA

<213> Homo sapien

<400> 224

cccctgaagg	cttcttggtta	gaaaatagta	cagttacaac	caataggaac	aacaaaaaga	60
aaaagtttgt	gacattgtag	tagggagtg	gtaccctta	ctcccatca	aaaaaaaaat	120
ggatacatgg	ttaaaggata	raagggcaat	attttatcat	atgttctaaa	agagaaggaa	180
gagaaaatac	tactttctcr	aaatggaagc	ccttaaagg	gctttgatac	tgaaggacac	240
aaatgtggcc	gtccatctc	ctttaragtt	gcatgacttg	gacacggtaa	ctgttgagc	300
tttaractcm	gcattgtgac					320

<210> 225

<211> 1214

<212> DNA

<213> Homo sapien

<400> 225

gaggactgca	gcccgcactc	gcagccctgg	caggcggcac	tggatcatgga	aaacgaattg	60
ttctgctcgg	gcgtcctggt	gcacccgcag	tgggtgctgt	cagccgcaca	ctgtttccag	120
aactcctaca	ccatcgggct	gggcctgcac	agtcttgagg	ccgaccaaga	gccagggagc	180
cagatgggtg	aggccagcct	ctccgtacgg	caccagagt	acaacagacc	cttgcctcgt	240
aacgacctca	tgctcatcaa	gttggaagaa	tccgtgtccg	agtctgacac	catccggagc	300
atcagcattg	cttcgcagtg	ccctaccgcg	gggaactctt	gcctcgtttc	tggctggggg	360
ctgctggcga	acggcagaat	gcctaccgtg	ctgcagtgcg	tgaacgtgtc	ggtggtgtct	420
gaggaggtct	gcagtaagct	ctatgacccg	ctgtaccacc	ccagcatgtt	ctgcgccggc	480
ggagggcaag	accagaagga	ctcctgcaac	ggtgactctg	gggggcccc	gatctgcaac	540
gggtacttgc	agggccttgt	gtctttcgga	aaagccccgt	gtggccaagt	tggcgtgcca	600
ggtgtctaca	ccaacctctg	caaattcact	gagtggatag	agaaaaccgt	ccaggccagt	660
taactctggg	gactgggaac	ccatgaaatt	gacccccaaa	tacatcctgc	ggaaggaatt	720
caggaatatc	tgttcccagc	ccctcctccc	tcaggccccag	gagtccaggc	ccccagcccc	780
tcctccctca	aaccaagggt	acagatcccc	agccccctct	ccctcagacc	caggagtcca	840
gacccccag	ccccctctcc	ctcagaccca	ggagtccagc	ccctcctccc	tcagaccag	900
gagtccagac	ccccagccc	ctcctccctc	agaccaggg	gtccaggccc	ccaaccctc	960
ctccctcaga	ctcagagggt	caagccccca	acccctcctt	ccccagaccc	agaggtccag	1020
gtcccagccc	ctcctccctc	agacccagcg	gtccaatgcc	acctagactc	tccctgtaca	1080
cagtgcctcc	ttgtggcacg	ttgacccaac	cttaccagtt	ggtttttcat	tttttgtccc	1140
tttcccttag	atccagaaat	aaagtctaag	agaagcgcaa	aaaaaaaaaa	aaaaaaaaaa	1200
aaaaaaaaaa	aaaa					1214

<210> 226

<211> 119

<212> DNA

<213> Homo sapien

<400> 226

accagtatg	tgcagggaga	cggaacccca	tgtgacagcc	cactccacca	gggttcccaa	60
agaacctggc	ccagtcataa	tcattcatcc	tgacagtggc	aataatcacg	ataaccagt	119

<210> 227

<211> 818

<212> DNA

<213> Homo sapien

<400> 227

acaattcata	gggacgacca	atgaggacag	ggaatgaacc	cggctctccc	ccagccctga	60
tttttgctac	atatggggtc	ccttttcatt	ctttgcaaaa	acactggggt	ttctgagAAC	120
acggacggtt	cttagcacia	tttgtgaaat	ctgtgtaraa	ccgggctttg	caggggagat	180
aattttcctc	ctctggagga	aaggtggtga	ttgacaggca	gggagacagt	gacaaggcta	240
gagaaaagcca	cgctcggcct	tctctgaacc	aggatggaac	ggcagacccc	tgaaaacgaa	300
gctttgtcccc	ttccaatcag	ccacttctga	gaacccccat	ctaacttctc	actggaaaag	360
agggcctcct	caggagcagt	ccaagagttt	tcaaagataa	cgtgacaact	accatctaga	420
ggaaaagggtg	caccctcagc	agagaagccg	agagcttaac	tctggtcggt	tccagagaca	480
acctgctggc	tgtcttggga	tgcgcccagc	ctttgagagg	ccactacccc	atgaacttct	540
gccatccact	ggacatgaag	ctgaggacac	tgggcttcaa	caactgagttg	tcagagagg	600
gacaggctct	gcctcaagc	cggctgaggg	cagcaaccac	tctcctcccc	tttctcacgc	660
aaagccattc	ccacaaatcc	agaccatacc	atgaagcaac	gagacccaaa	cagtttggct	720
caagaggata	tgaggactgt	ctcagcctgg	ctttgggctg	acaccatgca	cacacacaag	780
gtccacttct	aggttttcag	cctagatggg	agtcgtgt			818

<210> 228

<211> 744

<212> DNA

<213> Homo sapien

<400> 228

actggagaca	ctgttgaact	tgatcaagac	ccagaccacc	ccaggctctcc	ttcgtgggat	60
gtcatgacgt	ttgacatacc	tttggaacga	gcctcctcct	tggaaagatgg	aagaccgtgt	120
tcgtggccga	cctggcctct	cctggcctgt	ttcttaagat	gcggagtcac	atttcaatgg	180
taggaaaagt	ggcttcgtaa	aatagaagag	cagtcactgt	ggaactacca	aatggcgaga	240
tgctcgggtg	acattggggg	gctttgggat	aaaagattta	tgagccaact	attctctggc	300
accagattct	aggccagttt	gttccactga	agcttttccc	acagcagtcc	acctctgcag	360
gctggcagct	gaatggcttg	ccggtggctc	tgtggcaaga	tcacactgag	atcgatgggt	420
gagaaggcta	ggatgcttgt	ctagtgttct	tagctgtcac	gttggctcct	tccaggttgg	480
ccagacgggtg	ttggccactc	ccttctaaaa	cacaggcgcc	ctcctgggtga	cagtgacccg	540
ccgtgggtatg	ccttggccca	ttccagcagt	cccagttatg	catttcaagt	ttgggggttg	600
ttcttttcgt	taatgttctc	ctgtgttgtc	agctgtcttc	atttctctggg	ctaagcagca	660
ttgggagatg	tggaccagag	atccactcct	taagaaccag	tggcgaaaga	cacttttctt	720
cttcactctg	aagtagctgg	tggt				744

<210> 229

<211> 300

<212> DNA

<213> Homo sapien

<400> 229

cgagtctggg	ttttgtctat	aaagtttgat	ccctcctttt	ctcatccaaa	tcatgtgaac	60
cattacacat	cgaaataaaa	gaaaggtggc	agacttgccc	aacgccaggc	tgacatgtgc	120
tgcagggttg	ttgtttttta	attattattg	ttagaaacgt	cacccacagt	ccctgttaat	180
ttgtatgtga	cagccaactc	tgagaaggtc	ctatttttcc	acctgcagag	gatccagtct	240
cactaggctc	ctccttgccc	tcacactgga	gtctccgcca	gtgtgggtgc	ccactgacat	300

<210> 230

<211> 301

<212> DNA

<213> Homo sapien

<400> 230

cagcagaaca	aatacaaaata	tgaagagtgc	aaagatctca	taaaatctat	gctgaggaat	60
gagcgacagt	tcaaggagga	gaagcttgca	gagcagctca	agcaagctga	ggagctcagg	120

caatataaag	tcctggttca	cactcaggaa	cgagagctga	cccagttaag	ggagaagttg	180
cgggaaggga	gagatgcctc	cctctcattg	aatgagcatc	tccaggccct	cctcactccg	240
gatgaaccgg	acaagtccca	ggggcaggac	ctccaagaaa	cagacctcgg	ccgcgaccac	300
g						301

<210> 231

<211> 301

<212> DNA

<213> Homo sapien

<400> 231

gcaagcacgc	tggcaaactc	ctgtcaggtc	agctccagag	aagccattag	tcatttttagc	60
caggaactcc	aagtccacat	ccttggcaac	tggggacttg	cgcagggttag	ccttgaggat	120
ggcaacacgg	gactttctcat	caggaagtgg	gatgtagatg	agctgatcaa	gacggccagg	180
tctgaggatg	gcaggatcaa	tgatgtcagg	ccggttggtg	ccgccaatga	tgaacacatt	240
tttttttgtg	gacatgccat	ccattttctgt	caggatctgg	ttgatgactc	ggtcagcagc	300
c						301

<210> 232

<211> 301

<212> DNA

<213> Homo sapien

<400> 232

agtaggtatt	tcgtgagaag	ttcaacacca	aaactggaac	atagttctcc	ttcaagtgtt	60
ggcgacagcg	gggcttcctg	attcttggaat	ataactttgt	gtaaattaac	agccacctat	120
agaagagtcc	atctgctgtg	aaggagagac	agagaactct	gggttccgtc	gtcctgtcca	180
cgtgctgtac	caagtgtctg	tgccagcctg	ttacctgttc	tactgaaaa	tctgggcta	240
gctcttgtgt	atcacttctg	attctgacaa	tcaatcaatc	aatggcctag	agcactgact	300
g						301

<210> 233

<211> 301

<212> DNA

<213> Homo sapien

<400> 233

atgactgact	ttccagtaag	gctctctaa	gggtaagtag	gaggatccac	aggatttgag	60
atgctaaggc	cccagagatc	gtttgatcca	accctcttat	tttcagaggg	gaaaatgggg	120
cctagaagtt	acagagcatc	tagctgggtc	gctggcacc	ctggcctcac	acagactccc	180
gagtagctgg	gactacaggc	acacagtcac	tgaagcaggc	cctgttagca	attctatgcg	240
tacaaattaa	catgagatga	gtagagactt	tattgagaaa	gcaagagaaa	atcctatcaa	300
c						301

<210> 234

<211> 301

<212> DNA

<213> Homo sapien

<400> 234

aggctctaca	catcgagact	catccatgat	tgatatgaat	ttaaaaatta	caagcaaaga	60
cattttattc	atcatgatgc	tttcttttgt	ttcttctttt	cgttttcttc	tttttctttt	120
tcaatttcag	caacatactt	ctcaatttct	tcaggattta	aaatcttgag	ggattgatct	180
cgcctcatga	cagcaagttc	aatgtttttg	ccacctgact	gaaccacttc	caggagtgcc	240
ttgatcacca	gcttaatgg	cagatcatct	gcttcaatgg	cttcgtcagt	atagttcttc	300

t

301

<210> 235
 <211> 283
 <212> DNA
 <213> Homo sapien

<400> 235

tggggctgtg catcaggcgg gtttgagaaa tattcaattc tcagcagaag ccagaatttg	60
aattccctca tcttttaggg aatcatttac caggtttgga gaggattcag acagctcagg	120
tgctttcact aatgtctctg aacttctgtc cctctttgtt catggatagt ccaataaata	180
atgttatctt tgaactgatg ctcataggag agaataaag aactctgagt gatatcaaca	240
ttagggattc aaagaaatat tagatttaag ctcacactgg tca	283

<210> 236
 <211> 301
 <212> DNA
 <213> Homo sapien

<400> 236

aggtcctcca ccaactgcct gaagcacggg taaaattggg aagaagtata gtgcagcata	60
aatactttta aatcgatcag atttccctaa cccacatgca atcttcttca ccagaagagg	120
tcggagcagc atcattaata ccaagcagaa tgcgtaatat ataaatacaa tggatatatag	180
tgggtagacg gcttcatgag tacagtgtac tgtggtagcg taatctggac ttgggttgta	240
aagcatcgtg taccagtcag aaagcatcaa tactcgacat gaacgaatat aaagaacacc	300
a	301

<210> 237
 <211> 301
 <212> DNA
 <213> Homo sapien

<400> 237

cagtggtagt ggtgggtggac gtggcggttg tcgtgggtgcc ttttttggtg cccgtcacaa	60
actcaatttt tgttcgctcc tttttggcct tttccaattt gtccatctca attttctggg	120
ccttggctaa tgcctcatag taggagtcct cagaccagcc atgggggatca aacatatacct	180
ttgggtagtt ggtgccaagc tcgtcaatgg cacagaatgg atcagcttct cgtaaatcta	240
gggttccgaa attctttctt cctttggata atgtagtcca tatccattcc ctcctttatc	300
t	301

<210> 238
 <211> 301
 <212> DNA
 <213> Homo sapien

<400> 238

gggcagggtt tttttttttt ttttttgatg gtgcagaccc ttgctttatt tgtctgactt	60
gttcacagtt cagccccctg ctccagaaaac caacggggcca gctaaggaga ggaggaggca	120
ccttgagact tccggagtcg aggcctctcca gggttcccca gcccatcaat cattttctgc	180
acccccctgcc tgggaagcag ctccctgggg ggtgggaatg ggtgactaga agggatttca	240
gtgtgggacc cagggtctgt tcttcacagt aggaggtgga agggatgact aattttcttta	300
t	301

<210> 239
 <211> 239

<212> DNA

<213> Homo sapien

<400> 239

ataagcagct aggggaattct ttatttagta atgtcctaac ataaaaagttc acataactgc	60
ttctgtcaaa ccatgatact gagctttgtg acaacccaga aataactaag agaaggcaaa	120
cataatacct tagagatcaa gaaacattta cacagttcaa ctgtttaaaa atagctcaac	180
attcagccag tgagtagagt gtgaatgccg gcatacacag tatacagggtc cttcaggga	239

<210> 240

<211> 300

<212> DNA

<213> Homo sapien

<400> 240

ggtcctaatag aagcagcagc ttccacattt taacgcaggt ttacgggtgat actgtccttt	60
gggatctgcc ctccagtggg acccttttaag gaagaagtgg gcccaagcta agttccacat	120
gctgggtgag ccagatgact tctgttccct ggtcactttc ttcaatgggg cgaatggggg	180
ctgccaggtt tttaaaatca tgcttcatct tgaagcacac ggtcacttca cctcctcac	240
gctgtgggtg tactttgatg aaaataccca ctttgttggc ctttctgaag ctataatgtc	300

<210> 241

<211> 301

<212> DNA

<213> Homo sapien

<400> 241

gagggtctggt gctgaggtct ctgggctagg aagaggagtt ctgtggagct ggaagccaga	60
cctctttgga ggaaactcca gcagctatgt tgggtgtctct gaggggaatgc aacaaggctg	120
ctcctccatg tattggaaaa ctgcaaactg gactcaactg gaaggaagtg ctgctgccag	180
tgtgaagaac cagcctgagg tgacagaaac ggaagcaaac aggaacagcc agtcttttct	240
tctcctcct gtcatacggg ctctctcaag catcctttgt tgtcaggggc ctaaaaggga	300
g	301

<210> 242

<211> 301

<212> DNA

<213> Homo sapien

<400> 242

ccgaggtcct gggatgcaac caatcactct gtttcacgtg acttttatca ccatacaatt	60
tgtggcattt cctcattttc tacattgtag aatcaagagt gtaaataaat gtatatcgat	120
gtcttcaaga atatatcatt cttttttcac tagaaccat tcaaaatata agtcaagaat	180
cttaatatca acaaatatat caagcaaact ggaaggcaga ataactacca taatttagta	240
taagtaccca aagttttata aatcaaaagc cctaatagata accattttta gaattcaatc	300
a	301

<210> 243

<211> 301

<212> DNA

<213> Homo sapien

<400> 243

aggtaagtcc cagtttgaag ctcaaaagat ctggtatgag cataggctca tcgacgacat	60
ggtggcccaa gctatgaaat cagagggagg cttcatctgg gcctgtaaaa actatgatgg	120

tgacgtgcag tccgactctg tggcccaagg gtatggctct ctcggcatga tgaccagcgt 180
 gctggtttgt ccagatggca agacagtaga agcagaggct gcccacggga ctgtaaccgg 240
 tcaactaccgc atgttccaga aaggacagga gacgtccacc aatcccattg cttccatttt 300
 t 301

<210> 244
 <211> 300
 <212> DNA
 <213> Homo sapien

<400> 244
 gctggtttgc aagaatgaaa tgaatgattc tacagctagg acttaacctt gaaatggaaa 60
 gtcattgcaat cccatttgca ggatctgtct gtgcacatgc ctctgtagag agcagcattc 120
 ccagggacct tggaaacagt tgacactgta aggtgcttgc tccccaagac acatcctaaa 180
 aggtgttgta atggtgaaaa cgtcttcctt ctttattgcc cttctttatt tatgtgaaca 240
 actgtttgtc ttttgtgtat cttttttaa ctgtaaagtt caattgtgaa aatgaatatt 300

<210> 245
 <211> 301
 <212> DNA
 <213> Homo sapien

<400> 245
 gtctgagtat ttaaaatggt attgaaatta tccccaacca atgttagaaa agaaagaggt 60
 tatatactta gataaaaaat gaggtgaatt actatccatt gaaatcatgc tcttagaatt 120
 aaggccagga gatattgtca ttaatgtara cttcaggaca ctagagtata gcagccctat 180
 gttttcaaag agcagagatg caattaaata ttgttttagca tcaaaaaggc cactcaatac 240
 agctaataaa atgaaagacc taatttctaa agcaattctt tataattttac aaagttttaa 300
 g 301

<210> 246
 <211> 301
 <212> DNA
 <213> Homo sapien

<400> 246
 ggtctgtcct acaatgcctg cttcttgaaa gaagtcggca ctttctagaa tagctaaata 60
 acctgggctt attttaaaga actatttgta gctcagattg gttttcctat ggctaaaata 120
 agtgcttctt gtgaaaatta aataaaacag ttaattcaaa gccttgatat atgttaccac 180
 taacaatcat actaaatata ttttgaagta caaagtttga catgctctaa agtgacaacc 240
 caaatgtgtc ttacaaaaca cgttcctaac aaggtatgct ttacactacc aatgcagaaa 300
 c 301

<210> 247
 <211> 301
 <212> DNA
 <213> Homo sapien

<400> 247
 aggtcctttg gcagggctca tggatcagag ctcaaactgg agggaaaggc atttcgggta 60
 gcctaagagg gcgactggcg gcagcacaac caaggaaggc aaggttggtt cccccacgt 120
 gtgtcctgtg ttcaggtgcg acacacaatc ctcatgggaa caggatcacc catgcgctgc 180
 ccttgatgat caaggttggg gcttaagtgg attaagggag gcaagttctg ggttccttgc 240
 cttttcaaac catgaagtca ggctctgtat ccttcctttt cctaactgat attctaacta 300
 a 301

<210> 248
 <211> 301
 <212> DNA
 <213> Homo sapien

<400> 248
 aggtccttgg agatgccatt tcagccgaag gactcttctw ttcggaagta caccctcact 60
 attaggaaga ttcttagggg taatttttct gaggaaggag aactagccaa cttagaatt 120
 acaggaagaa agtggtttgg aagacagcca aagaaataaa agcagattaa attgtatcag 180
 gtacattcca gcctgttggc aactccataa aaacatttca gattttaatc ccgaatttag 240
 ctaatgagac tggatttttg ttttttatgt tgtgtgtcgc agagctaaaa actcagttcc 300
 c 301

<210> 249
 <211> 301
 <212> DNA
 <213> Homo sapien

<400> 249
 gtccagagga agcacctggt gctgaactag gcttgccctg ctgtgaactt gcacttggag 60
 ccctgacgct gctgttctcc ccgaaaaacc cgaccgacct ccgcgatctc cgtecccgccc 120
 ccagggagac acagcagtga ctcagagctg gtcgcacact gtgcctccct cctcacggcc 180
 catcgtaatg aattattttg aaaattaatt ccaccatcct ttcagattct ggatggaaag 240
 actgaatcct tgactcagaa ttgtttgctg aaaagaatga tgtgactttc ttagtcattt 300
 a 301

<210> 250
 <211> 301
 <212> DNA
 <213> Homo sapien

<400> 250
 ggtctgtgac aaggacttgc aggctgtggg aggcaagtga cccttaacac tacacttctc 60
 cttatcttta ttggcttgat aaacataatt atttctaaca ctagcttatt tccagttgcc 120
 cataagcaca tcagtacttt tctctggctg gaatagtaaa ctaaagtatg gtacatctac 180
 ctaaaagact actatgtgga ataatacata ctaatgaagt attacatgat ttaaagacta 240
 caataaaacc aaacatgctt ataacattaa gaaaaacaat aaagatacat gattgaaacc 300
 a 301

<210> 251
 <211> 301
 <212> DNA
 <213> Homo sapien

<400> 251
 gccgaggtcc tacatttggc ccagtttccc cctgcacccct ctccaggggc cctgcctcat 60
 agacaacctc atagagcata ggagaactgg ttgccctggg ggcaggggga ctgtctggat 120
 ggcaggggtc ctcaaaaatg ccactgtcac tgccaggaaa tgcttctgag cagtacacct 180
 cattgggatc aatgaaaagc ttcaagaaat cttcaggctc actctcttga aggcccgga 240
 cctctggagg ggggcagtgg aatcccagct ccaggacgga tcctgtcgaa aagatatcct 300
 c 301

<210> 252
 <211> 301

<212> DNA

<213> Homo sapien

<400> 252

```

gcaaccaatc actctgtttc acgtgacttt tatcaccata caatttgtgg catttcctca      60
ttttctacat tgtagaatca agagtgtaaa taaatgtata tcgatgtctt caagaatata      120
tcatttccttt ttcactagga acccattcaa aatataagtc aagaatctta atatcaacaa      180
atatatcaag caaactggaa ggcagaataa ctaccataat ttagtataag tacccaaagt      240
tttataaatc aaaagcccta atgataacca tttttagaat tcaatcatca ctgtagaatc      300
a                                                                                   301

```

<210> 253

<211> 301

<212> DNA

<213> Homo sapien

<400> 253

```

ttccctaaga agatgttatt ttgttgggtt ttgttccccc tccatctcga ttctcgtacc      60
caactaaaaa aaaaaaataa agaaaaaatg tgctgcgttc tgaaaaataa ctcccttagct      120
tggtctgatt gttttcagac cttaaaatat aaacttgttt cacaagcttt aatccatgtg      180
gatttttttt cttagagaac cacaaaacat aaaaggagca agtcggactg aatacctgtt      240
tccatagtgc ccacagggta ttcctcacat tttctccata ggaaaatgct ttttcccaag      300
g                                                                                   301

```

<210> 254

<211> 301

<212> DNA

<213> Homo sapien

<400> 254

```

cgctgcgcct ttcccttggg ggagggggcaa ggccagaggg ggtccaagtg cagcacgagg      60
aacttgacca attcccttga agcgggtggg ttaaaccctg taaatgggaa caaatcccc      120
ccaaatctct tcatcttacc ctgggtggact cctgactgta gaattttttg gttgaaacaa      180
gaaaaaaata agcttttggg cttttcaagg ttgcttaaca ggtactgaaa gactggcctc      240
acttaaaactg agccaggaaa agctgcagat ttattaatgg gtgtgttagt gtgcagtgcc      300
t                                                                                   301

```

<210> 255

<211> 302

<212> DNA

<213> Homo sapien

<400> 255

```

agcttttttt tttttttttt tttttttttt ttcattaaaa aatagtgtct tttattataa      60
attactgaaa tgtttctttt ctgaatataa atataaatat gtgcaaagtt tgacttggat      120
tggtgatttt ttgagttctt caagcatctc ctaataccct caagggcctg agtagggggg      180
aggaaaaagg actggaggtg gaatctttat aaaaaacaag agtgattgag gcagattgta      240
aacattatta aaaaacaaga aacaaacaaa aaaaatagaga aaaaaccac cccaacacac      300
aa                                                                                   302

```

<210> 256

<211> 301

<212> DNA

<213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(301)
 <223> n = A,T,C or G

<400> 256
 gttccagaaa acattgaagg tggcttccca aagtctaact agggatcccc cctctagcct 60
 aggaccctcc tccccacacc tcaatccacc aaaccatcca taatgcaccc agataggccc 120
 acccccacaaa gcctggacac cttgagcaca cagttatgac caggacagac tcatctctat 180
 aggcaaatac ctgctggcaa actggcatta cctggtttgt ggggatgggg gggcaagtgt 240
 gtggcctctc ggctgggta gcaagaacat tcagggtagg cctaagttan tcgtgttagt 300
 t 301

<210> 257
 <211> 301
 <212> DNA
 <213> Homo sapien

<400> 257
 gttgtggagg aactctggct tgctcattaa gtcctactga ttttcactat cccctgaatt 60
 tccccactta tttttgtctt tcactatcgc aggccttaga agaggtctac ctgcctccag 120
 tcttacctag tccagtctac cccctggagt tagaatggcc atcctgaagt gaaaagtaat 180
 gtcacattac tcccttcagt gatctcttgt agaagtgcc atccctgaat gccaccaaga 240
 tcttaatctt cacatcttta atcttatctc ttgactcct ctttacaccg gagaaggctc 300
 c 301

<210> 258
 <211> 301
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(301)
 <223> n = A,T,C or G

<400> 258
 cagcagtagt agatgccgta tgccagcacg cccagcactc ccaggatcag caccagcacc 60
 agggggccag ccaccaggcg cagaagcaag ataaacagta ggctcaagac cagagccacc 120
 cccagggcaa caagaatcca ataccaggac tgggcaaaat cttcaaagat cttaacactg 180
 atgtctcggg cattgaggct gtcaataana cgctgatccc ctgctgtatg gtggtgtcat 240
 tggtgatccc tgggagcgcc ggtggagtaa cgttgggtcca tggaaagcag cgcccacaac 300
 t 301

<210> 259
 <211> 301
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(301)
 <223> n = A,T,C or G

<400> 259

```

tcatatatgc aaacaaatgc agactangcc tcaggcagag actaaaggac atctcttggg    60
gtgtcctgaa gtgatttgga cccctgaggg cagacaccta agtaggaatc ccagtgggaa    120
gcaaagccat aaggaagccc aggattcctt gtgatcagga agtggggccag gaaggctctgt    180
tccagctcac atctcatctg catgcagcac ggaccggatg cgcccactgg gtcttggctt    240
ccctcccatc ttctcaagca gtgtccttgt tgagccattt gcatecttgg ctccaggtgg    300
c                                                                    301

```

```

<210> 260
<211> 301
<212> DNA
<213> Homo sapien

```

```

<400> 260
ttttttttct ccctaaggaa aaagaaggaa caagtctcat aaaaccaa at aagcaatggg    60
aagggtgtctt aacttgaaaa agattaggag tctctgggtt acaagttata attgaatgaa    120
agaactgtaa cagccacagt tggccatttc atgccaatgg cagcaaacia caggattaac    180
tagggcaaaa taaataagtg tgtggaagcc ctgataagtg cttataaatac agactgattc    240
actgagacat cagtacctgc ccgggcgggc gctcgagccg aattctgcag atatccatca    300
c                                                                    301

```

```

<210> 261
<211> 301
<212> DNA
<213> Homo sapien

```

```

<400> 261
aaatattcga gcaaattcctg taactaatgt gtctccataa aaggctttga actcagtgaa    60
tctgcttcca tccacgattc tagcaatgac ctctcggaca tcaaagctcc tcttaagggt    120
agcaccaact attccataca attcatcagc aggaaataaa ggctcttcag aagggttcaat    180
ggtgacatcc aatttcttct gataatttag attcctcaca accttcctag ttaagtgaag    240
ggcatgatga tcatccaaag ccagtggtc atttactcca gactttctgc aatgaagatc    300
a                                                                    301

```

```

<210> 262
<211> 301
<212> DNA
<213> Homo sapien

```

```

<400> 262
gaggagagcc tgttacagca tttgtaagca cagaatactc caggagtatt tgtaattgtc    60
tgtgagcttc ttgccgcaag tctctcagaa atttaaaaag atgcaaatcc ctgagtcacc    120
cctagacttc ctaaaccaga tctctggggg ctggaacctg gcaactctgca tttgtaatga    180
gggctttctg gtgcacacct aattttgtgc atctttgccc taaatcctgg attagtgtcc    240
catcattacc ccacattat aatgggatag attcagagca gatactctcc agcaaagaat    300
c                                                                    301

```

```

<210> 263
<211> 301
<212> DNA
<213> Homo sapien

```

```

<220>
<221> misc_feature
<222> (1)...(301)
<223> n = A,T,C or G

```

<400> 263

tttagcttgt	ggtaaatgac	tcacaaaact	gatttttaaaa	tcaagttaat	gtgaattttg	60
aaaattacta	cttaatccta	attcacata	acaatggcat	taaggtttga	cttgagttgg	120
ttcttagtat	tatttatggg	aaataggctc	ttaccacttg	caaataactg	gccacatcat	180
taatgactga	cttcccagta	aggctctcta	aggggtaagt	angaggatcc	acaggatttg	240
agatgctaag	gccccagaga	tcgtttgatc	caaccctctt	attttcagag	gggaaaatgg	300
g						301

<210> 264

<211> 301

<212> DNA

<213> Homo sapien

<400> 264

aaagacgtta	aaccactcta	ctaccacttg	tggaaactctc	aaagggtaaa	tgacaaascc	60
aatgaatgac	tctaaaaaca	atattttacat	ttaatggttt	gtagacaata	aaaaaacaag	120
gtggatagat	ctagaattgt	aacattttta	gaaaaccata	scatttgaca	gatgagaaaag	180
ctcaattata	gatgcaaagt	tataactaaa	ctactatagt	agtaaagaaa	tacatttcac	240
acccttcata	taaattcact	atcttggctt	gaggcactcc	ataaaatgta	tcacgtgcat	300
a						301

<210> 265

<211> 301

<212> DNA

<213> Homo sapien

<400> 265

tgccccagtt	atgtgtaagt	gtatccgcac	ccagaggtaa	aactacactg	tcattctttgt	60
cttcttgtga	cgcagtattt	cttctctggg	gagaagccgg	gaagtcttct	cctggctcta	120
catattcttg	gaagtctcta	atcaactttt	gttccatttg	tttcatttct	tcaggaggga	180
ttttcagttt	gtcaacatgt	tctctaacaa	catttgccca	tttctgtaaa	gaatccaaag	240
cagtccaagg	ctttgacatg	tcaacaacca	gcataactag	agtatccttc	agagatacgg	300
c						301

<210> 266

<211> 301

<212> DNA

<213> Homo sapien

<400> 266

taccgtctgc	ccttctctcc	atccaggcca	tctgcgaatc	tacatgggtc	ctcctattcg	60
acaccagatc	actctttcct	ctaccacag	gcttgctatg	agcaagagac	acaacctcct	120
ctcttctgtg	ttccagcttc	ttttcctggt	cttcccaccc	cttaagttct	attcctgggg	180
atagagacac	caatacccat	aacctctctc	ctaagcctcc	ttataacca	gggtgcacag	240
cacagactcc	tgacaactgg	taaggccaat	gaactgggag	ctcacagctg	gctgtgcctg	300
a						301

<210> 267

<211> 301

<212> DNA

<213> Homo sapien

<400> 267

aaagagcaca	ggccagctca	gcctgccctg	gccatctaga	ctcagcctgg	ctccatgggg	60
------------	------------	------------	------------	------------	------------	----


```

gtttctcagtg ctgagtccat ccaggaaaag ctcacctaga ctttctgagg ctgaatcttc      120
atcctcacag gcagcttctg agagcctgat attcctagcc ttgatgggtct ggagtaaagc      180
ctcattctga ttctctctct tcttttcttt caagttggct ttctcacat ccctctgttc      240
aattcgcttc agcttgtctg ctttagccct catttccaga agcttcttct ctttggcatc      300
t                                                                                   301

```

```

<210> 268
<211> 301
<212> DNA
<213> Homo sapien

```

```

<400> 268
aatgtctcac tcaactactt cccagcctac cgtggcctaa ttctgggagt tttcttctta      60
gatcttggga gagctgggtc ttctaaggag aaggaggaag gacagatgta actttggatc      120
tcgaagagga agtctaattg aagtaattag tcaacgggtc ttgtttagac tcttgggaata      180
tgctgggtgg ctcagtgagc ccttttggag aaagcaagta ttattcttaa ggagtaacca      240
cttcccattg ttctactttc taccatcatc aattgtatat tatgtattct ttggagaact      300
a                                                                                   301

```

```

<210> 269
<211> 301
<212> DNA
<213> Homo sapien

```

```

<400> 269
taacaatata cactagctat ctttttaact gtccatcatt agcaccaatg aagattcaat      60
aaaattacct ttattcacac atctcaaac aattctgcaa attcttagtg aagtttaact      120
atagtcacag accttaaata ttacattgt tttctatgtc tactgaaat aagttcacta      180
cttttctgga tattctttac aaaatcttat taaaattcct ggtattatca cccccaatta      240
tacagtagca caaccacctt atgtagtttt tacatgatag ctctgtagaa gtttcacatc      300
t                                                                                   301

```

```

<210> 270
<211> 301
<212> DNA
<213> Homo sapien

```

```

<400> 270
cattgaagag cttttgcgaa acatcagaac acaagtgcct ataaaaattaa ttaagcctta      60
cacaagaata catattcctt ttattttctaa ggagttaaac atagatgtag ctgatgtgga      120
gagcttgctg gtgcagtgca tattggataa cactattcat ggccgaattg atcaagtcaa      180
ccaactcctt gaactggatc atcagaagaa ggggtggtgca cgatatactg cactagataa      240
tggaaccaacc aactaaattc tctcaccagg ctgtatcagt aaactggcct aacagaaaac      300
a                                                                                   301

```

```

<210> 271
<211> 301
<212> DNA
<213> Homo sapien

```

```

<220>
<221> misc_feature
<222> (1)...(301)
<223> n = A,T,C or G

```

<400> 271

aaaagggttct	cataagatta	acaattttaa	taaatatttg	atagaacatt	ctttctcatt	60
tttatagctc	atcttttagg	ttgatattca	gttcatgctt	cccttgctgt	tcttgatcca	120
gaattgcaat	cacttcatca	gcctgtattc	gtcccaattc	tctataaagt	gggtccaagg	180
tgaaccacag	agccacagca	cacctcttcc	ccttggtgac	tgccttcacc	ccatganggt	240
tctctcctcc	agatganaac	tgatcatgcg	cccacatttt	gggttttata	gaagcagtca	300
c						301

<210> 272

<211> 301

<212> DNA

<213> Homo sapien

<400> 272

taaattgcta	agccacagat	aacaccaatc	aaatggaaca	aatcactgtc	ttcaaagtgc	60
ttatcagaaa	accaaagtga	cctggaatct	tcataatacc	taaacatgcc	gtatttagga	120
tccaataatt	ccctcatgat	gagcaagaaa	aattctttgc	gcacccctcc	tgcattccaca	180
gcattcttct	caacaaatat	aaccttgagt	ggcttcttgt	aattctatgtt	ctttgttttc	240
ctaaggactt	ccattgcata	tcctacaata	ttttctctac	gcaccactag	aattaagcag	300
g						301

<210> 273

<211> 301

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(301)

<223> n = A,T,C or G

<400> 273

acatgtgtgt	atgtgtatct	ttgggaaaaa	aanaagacat	cttggtttayt	atttttttgg	60
agagangctg	ggacatggat	aatcacwtaa	tttgctayta	tyactttaat	ctgactygaa	120
gaaccgtcta	aaaataaaa	ttaccatgtc	dtatattcct	tatagtatgc	ttatttcacc	180
ttytttctgt	ccagagagag	tatcagtgac	ananatttma	gggtgaamac	atgmattggt	240
gggacttnty	tttacngagm	accctgccc	sgcgccctcg	makengantt	ccgcsananc	300
t						301

<210> 274

<211> 301

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(301)

<223> n = A,T,C or G

<400> 274

cttatatact	ctttctcaga	ggcaaaaagag	gagatgggta	atgtagacaa	ttctttgagg	60
aacagttaa	gattattaga	gagaangaat	ggaccaagga	gacagaaatt	aacttgtaaa	120
tgattctctt	tggaatctga	atgagatcaa	gaggccagct	ttagcttggt	gaaaagtcca	180
tctaggtatg	gttgcatctt	cgtcttcttt	tctgcagtag	ataatgaggt	aaccgaaggc	240
aattgtgctt	cttttgataa	gaagctttct	tggtcatatc	aggaaattcc	aganaaagtc	300

c

301

<210> 275
 <211> 301
 <212> DNA
 <213> Homo sapien

 <220>
 <221> misc_feature
 <222> (1)...(301)
 <223> n = A,T,C or G

<400> 275

tcggtgtcag cagcacgtgg cattgaacat tgcaatgtgg agcccaaacc acagaaaatg	60
gggtgaaatt ggccaacttt ctattaactt atgttggcaa ttttgccacc aacagtaagc	120
tggcccttct aataaaagaa aattgaaagg tttctcacta aacggaatta agtagtggag	180
tcaagagact cccaggcctc agcgtacctg cccggggcggc cgctcgaagc cgaattctgc	240
agatatccat cacactggcg gncgctcgan catgcatcta gaaggnccaa ttcgccctat	300
a	301

<210> 276
 <211> 301
 <212> DNA
 <213> Homo sapien

<400> 276

tgtacacata ctcaataaat aaatgactgc atttgtggtat tattactata ctgattatat	60
ttatcatgtg acttctaatt agaaaatgta tccaaaagca aaacagcaga tatacaaaat	120
taaagagaca gaagatagac attaacagat aaggcaactt atacattgag aatccaaatc	180
caatacathtt aaacattttg gaaatgaggg ggacaaatgg aagccagatc aaatttgtgt	240
aaaactattc agtatgtttc ccttgcttca tgtctgagaa ggctctcctt caatggggat	300
g	301

<210> 277
 <211> 301
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(301)
 <223> n = A,T,C or G

<400> 277

tttgttgatg tcagtatttt attacttgcg ttatgagtgc tcacctggga aattctaaag	60
atacagagga cttggaggaa gcagagcaac tgaatttaatt ttaaaagaag gaaaacattg	120
gaatcatggc actcctgata ctttcccaaa tcaacactct caatgcccc cctcgtcct	180
caccatagtg gggagactaa agtggccacg gatttgacct anggtgagc tgcgttctga	240
gttcnctgtc gattacatct gaccagtctc ctttttccga agtcntccg ttcaatcttg	300
c	301

<210> 278
 <211> 301
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(301)
 <223> n = A,T,C or G

<400> 278
 taccactaca ctccagcctg ggcaacagag caagacctgt ctcaaagcat aaaatggaat 60
 aacatatcaa atgaaacagg gaaaatgaag ctgacaattt atggaagcca gggcttggtca 120
 cagtctctac tgttattatg cattacctgg gaatttatat aagcccttaa taataatgcc 180
 aatgaacatc tcatgtgtgc tcacaatggt ctggcactat tataagtgtc tcacagggtt 240
 tatgtgttct tcgtaacttt atggantagg tactcggccg cgaacacgct aagccgaatt 300
 c 301

<210> 279
 <211> 301
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(301)
 <223> n = A,T,C or G

<400> 279
 aaagcaggaa tgacaaagct tgcttttctg gtatgttcta ggtgtattgt gacttttact 60
 gttatattaa ttgccaatat agtaaatat agattatata tgtatagtgt ttcacaaagc 120
 ttagaccttt accttccagc caccacacag tgcttgatat ttcagagtca gtcattgggtt 180
 atacatgtgt agttccaaaag cacataagct agaanaanaa atatttctag ggagcactac 240
 catctgtttt cacatgaaat gccacacaca tagaactcca acatcaattt cattgcacag 300
 a 301

<210> 280
 <211> 301
 <212> DNA
 <213> Homo sapien

<400> 280
 ggtactggag ttttcctccc ctgtgaaaac gtaactactg ttgggagtga attgaggatg 60
 tagaaagggtg gtggaaccaa attgtggtca atggaaatag gagaatatgg ttctcactct 120
 tgagaaaaaa acctaaagatt agcccaggta gttgcctgta acttcagttt ttctgcctgg 180
 gtttgatata gtttaggggtt ggggttagat taagatctaa attacatcag gacaaagaga 240
 cagactatta actccacagt taattaagga ggtatgttcc atgtttattt gttaaagcag 300
 t 301

<210> 281
 <211> 301
 <212> DNA
 <213> Homo sapien

<400> 281
 aggtacaaga aggggaatgg gaaagagctg ctgctgtggc attgttcaac ttggatatcc 60
 gccgagcaat ccaaattcctg aatgaagggg catcttctga aaaaggagat ctgaatctca 120
 atgtggttagc aatgggttta tcgggttata cggtatgagaa gaactccctt tggagagaaa 180
 tgtgtagcac actgcgatta cagctaaata acccgtattt gtgtgtcatg ttgcatttc 240

tgacaagtga aacaggatct tacgatggag ttttgtatga aaacaaagtt gcagtacctc 300
g 301

<210> 282
<211> 301
<212> DNA
<213> Homo sapien

<400> 282
caggtactac agaattaaaa tactgacaag caagtagttt cttggcgtgc acgaattgca 60
tccagaaccc aaaaattaag aaattcaaaa agacattttg tgggcacctg ctagcacaga 120
agcgcagaag caaagcccag gcagaacat gctaacctta cagctcagcc tgcacagaag 180
cgcagaagca aagcccaggc agaaccatgc taaccttaca gctcagcctg cacagaagcg 240
cagaagcaaa gccccaggcag aacatgctaa ccttacagct cagcctgcac agaagcacag 300
a 301

<210> 283
<211> 301
<212> DNA
<213> Homo sapien

<400> 283
atctgtatac ggcagacaaa ctttatarag tgtagagagg tgagcgaaag gatgcaaaag 60
cactttgagg gctttataat aatatgctgc ttgaaaaaaa aaatgtgtag ttgatactca 120
gtgcatctcc agacatagta aggggttgct ctgaccaatc aggtgatcat tttttctatc 180
acttcccagg ttttatgcaa aaattttgtt aaattctata atggtgatat gcattcttta 240
ggaaacatat acatttttaa aaatctattt tatgtaagaa ctgacagacg aatttgcttt 300
g 301

<210> 284
<211> 301
<212> DNA
<213> Homo sapien

<400> 284
caggtacaaa acgctattaa gtggcttaga atttgaacat ttgtggtctt tatctacttt 60
gcttcgtgtg tgggcaaagc aacatcttcc cttaaataat attaccaaga aaagcaagaa 120
gcagattagg tttttgacaa acaaaacagg ccaaaagggg gctgacctgg agcagagcat 180
gggtgagaggc aaggcatgag agggcaagtt tggtgtggac agatctgtgc ctactttatt 240
actggagtaa aagaaaacaa agttcattga tgtcgaagga tatatacagt gttagaagaa 300
a 301

<210> 285
<211> 301
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> (1)...(301)
<223> n = A,T,C or G

<400> 285
acatcacat gatcgatcc cccaccatt atacgttgta tgtttacata aatactcttc 60
aatgatcatt agtgttttaa aaaaaatact gaaaactcct tctgcatccc aatctctaac 120

```

caggaaagca aatgctatTT acagacCTgc aagccCTccc tcaaacnaaa ctatTTctgg 180
attaaatag tctgactTct tttgaggtca cagactagg caaatgctat ttacgatctg 240
caaaagctgt ttgaagagtc aaagCCCCca tgtgaacacg atttctggac cctgtaacag 300
t 301

```

```

<210> 286
<211> 301
<212> DNA
<213> Homo sapien

```

```

<400> 286
taccactgca ttccagcctg ggtgacagag tgagactccg tctccaaaaa aaactTTgct 60
tgtatattat ttttgCctta cagtggatca ttctagtagg aaaggacagt aagattTTTT 120
atcaaaatgt gtcatgccag taagagatgt tatattCTtt tctcattTct tccccaccca 180
aaaataagct accatatagc ttataagtct caaatTTTTg ctttttacta aaatgtgatt 240
gtttctgttc attgtgtatg cttcatcacc tatattaggc aaattccatt ttttcccttg 300
t 301

```

```

<210> 287
<211> 301
<212> DNA
<213> Homo sapien

```

```

<400> 287
tacagatctg ggaactaaat attaaaaatg agtgtggctg gatatatgga gaatgttggg 60
cccagaagga acgtagagat cagatattac aacagCTttg ttttgagggT tagaaatatg 120
aaatgatttg gttatgaacg cacagTTtag gcagcagggc cagaatCctg accctctgcc 180
ccgtgggtat ctctcCcca gcttggtctg ctcagtgtat cacagtattc catTTtgTTt 240
gttgcatgtc ttgtgaagcc atcaagattt tctcgtctgt tttcctctca ttggtaatgc 300
t 301

```

```

<210> 288
<211> 301
<212> DNA
<213> Homo sapien

```

```

<400> 288
gtacacCTaa ctgcaaggac agctgaggaa tgtaatgggc agccgCTttt aaagaagtag 60
agtcaatagg aagacaaatt ccagttccag ctCagtctgg gtatctgcaa agctgcaaaa 120
gatCTtttaa gacaattTca agagaatatt tcCTtaaagt tggcaatttg gagatcatac 180
aaaagcatct gctTTtgTga tTTaatTTtag ctcatctggc cactggaaga atCcaaacag 240
tctgcCTtaa ttttggaTga atgcatgatg gaaattcaat aatttagaaa gttaaaaaaa 300
a 301

```

```

<210> 289
<211> 301
<212> DNA
<213> Homo sapien

```

```

<220>
<221> misc_feature
<222> (1)...(301)
<223> n = A,T,C or G

```

```

<400> 289

```

```

ggtagactgt ttccatgtta tgtttctaca cattgctacc tcagtgtccc tggaaactta      60
gcttttgatg tctccaagta gtccaccttc atttaactct ttgaaactgt atcatctttg      120
ccaagtaaga gtggtggcct atttcagctg ctttgacaaa atgactggct cctgacttaa      180
cgttctataa atgaatgtgc tgaagcaaag tgcccatggg ggcggcgaan aagagaaaga      240
tgtgtttgt tttggactct ctgtggtccc ttccaatgct gtgggtttcc aaccagnnga      300
a                                                                           301

```

```

<210> 290
<211> 301
<212> DNA
<213> Homo sapien

```

```

<220>
<221> misc_feature
<222> (1)...(301)
<223> n = A,T,C or G

```

```

<400> 290
acactgagct cttcttgata aatatacaga atgcttggca tatacaagat tctatactac      60
tgactgatct gttcatttct ctcacagctc ttacccccaa aagcttttcc accctaagtg      120
ttctgacctc cttttctaat cacagtaggg atagaggcag anccacctac aatgaacatg      180
gagttctatc aagaggcaga aacagcacag aatcccagtt ttaccattcg ctagcagtgc      240
tgccttgaac aaaaacattt ctccatgtct cattttcttc atgcctcaag taacagtgag      300
a                                                                           301

```

```

<210> 291
<211> 301
<212> DNA
<213> Homo sapien

```

```

<400> 291
caggtacca tttcttctat cctagaaaca tttcatttta tgttgttgaa acataacaac      60
tatatcagct agatttttct tctatgcttt acctgctatg gaaaatttga cacattctgc      120
tttactcttt tgtttatagg tgaatcacia aatgtatttt tatgtattct gtagttcaat      180
agccatggct gtttacttca ttaattttat ttagcataaa gacattatga aaaggcctaa      240
acatgagctt cacttcccca ctaactaatt agcatctgtt atttcttaac cgtaatgcct      300
a                                                                           301

```

```

<210> 292
<211> 301
<212> DNA
<213> Homo sapien

```

```

<220>
<221> misc_feature
<222> (1)...(301)
<223> n = A,T,C or G

```

```

<400> 292
accttttagt agtaatgtct aataataaat aagaaatcaa ttttataagg tccatatagc      60
tgtattaaat aatttttaag tttaaaagat aaaataccat cattttaaat gttgggtattc      120
aaaaccaaag natataaccg aaaggaaaaa cagatgagac ataaaatgat ttgcnagatg      180
ggaaatatag tastyatga atgttnatta aattccagtt ataatagtgg ctacacactc      240
tcactacaca cacagacccc acagtcctat atgccacaaa cacatttcca taacttgaaa      300
a                                                                           301

```

<210> 293
 <211> 301
 <212> DNA
 <213> Homo sapien

<400> 293
 ggtaccaagt gctgggtgcca gcctgttacc tgttctcact gaaaagtctg gctaattgctc 60
 ttgtgtagtc acttctgatt ctgacaatca atcaatcaat ggcctagagc actgactgtt 120
 aacacaaaacg tctactagcaa agtagcaaca gctttaagtc taaatacaaa gctgttctgt 180
 gtgagaattt tttaaaaaggc tacttgtata ataacccttg tcatttttaa tgtacctcgg 240
 ccgcgaccac gctaagccga attctgcaga tatccatcac actggcgggc gctcgagcat 300
 g 301

<210> 294
 <211> 301
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(301)
 <223> n = A,T,C or G

<400> 294
 tgaccataaa caatacac tagctatctt tttaactgtc catcattagc accaatgaag 60
 attcaataaaa attaccttta ttcacacatc tcaaaacaatt tctgcaaatt cttagtgaag 120
 tttaactata gtcacaganc tttaaatttc acattgtttt ctatgtctac tgaaaataag 180
 ttactacttt ttctgggata ttctttacaa aatcttatta aaattcctgg tattatcacc 240
 cccaattata cagtagcaca accaccttat gtagttttta catgatagct ctgtagaggt 300
 t 301

<210> 295
 <211> 305
 <212> DNA
 <213> Homo sapien

<400> 295
 gtactctttc tctccctcc tctgaattta attctttcaa cttgcaattt gcaaggatta 60
 cacatttcac tgtgatgtat attgtgttgc aaaaaaaaaa gtgtctttgt ttaaaattac 120
 ttggtttgtg aatccatctt gctttttccc cattggaact agtcattaac ccatctctga 180
 actggtagaa aaacrtctga agagctagtc tatcagcatc tgacagggtga attggatggg 240
 tctcagaacc atttcacca gacagcctgt ttctatcctg tttaataaat tagtttgggt 300
 tctct 305

<210> 296
 <211> 301
 <212> DNA
 <213> Homo sapien

<400> 296
 aggtactatg ggaagctgct aaaataatat ttgatagtaa aagtatgtaa tgtgctatct 60
 cacctagtag taaactaaaa ataaactgaa actttatgga atctgaagtt attttccttg 120
 attaaataga attaataaac caatatgagg aaacatgaaa ccatgcaatc tactatcaac 180
 tttgaaaaag tgattgaacg aaccacttag ctttcagatg atgaacactg ataagtcatt 240

tgtcattact ataaatttta aaatctgtta ataagatggc ctatagggag gaaaaagggg 300
c 301

<210> 297
<211> 300
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> (1)...(300)
<223> n = A,T,C or G

<400> 297
actgagtttt aactggacgc caagcaggca aggctggaag gttttgctct ctttgtgcta 60
aagggtttga aaaccttgaa ggagaatcat ttgacaaga agtacttaag agtctagaga 120
acaaagangt gaaccagctg aaagctctcg ggggaanctt acatgtgttg ttaggcctgt 180
tccatcattg ggagtgcact ggccatccct caaaatttgt ctgggctggc ctgagtggc 240
accgcacctc ggccgcgacc acgctaagcc gaattctgca gatatccatc acactggcgg 300

<210> 298
<211> 301
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> (1)...(301)
<223> n = A,T,C or G

<400> 298
tatggggttt gtcacccaaa agctgatgct gagaaaggcc tccctggggc ccctcccgcg 60
ggcatctgag agacctggtg ttccagtgtt tctggaaatg ggtcccagtg ccgccggctg 120
tgaagctctc agatcaatca cgggaagggc ctggcggtgg tggccacctg gaaccaccct 180
gtcctgtctg tttacatttc actaycaggt tttctctggg cattacnatt tgttccccta 240
caacagtgac ctgtgcattc tgctgtggcc tgctgtgtct gcagggtggc ctcagcgagg 300
t 301

<210> 299
<211> 301
<212> DNA
<213> Homo sapien

<400> 299
gttttgagac ggagtttcac tcttgttgcc cagactggac tgcaatggca gggctctctgc 60
tcaactgcacc ctctgcctcc caggttcgag caattctcct gcctcagcct cccaggtagc 120
tgggattgca ggtcacgcc accataccca gctaattttt ttgtattttt agtagagacg 180
gagtttcgcc atgttggcca gctggctca aactcctgac ctcaagcgac ctgcctgcct 240
cggcctccca aagtgtgga attataggca tgagtcaaca cgcccagcct aaagatattt 300
t 301

<210> 300
<211> 301
<212> DNA
<213> Homo sapien

<400> 300

attcagtttt	atttgctgcc	ccagtatctg	taaccaggag	tgccacaaaa	tcttgccaga	60
tatgtcccac	accactggg	aaaggctccc	acctggctac	ttcctctatc	agctgggtca	120
gctgcattcc	acaaggttct	cagcctaata	agtttacta	cctgccagtc	tcaaaactta	180
gtaaagcaag	accatgacat	tccccacgg	aaatcagagt	ttgccccacc	gtcttgttac	240
tataaagcct	gcctctaaca	gtccttgctt	cttcacacca	atcccagagc	catcccccat	300
g						301

<210> 301

<211> 301

<212> DNA

<213> Homo sapien

<400> 301

ttaaattttt	gagaggataa	aaaggacaaa	taatctagaa	atgtgtcttc	ttcagtctgc	60
agaggacccc	aggtctccaa	gcaaccacat	ggcgaagggc	atgaataatt	aaaagttggt	120
gggaactcac	aaagaccctc	agagctgaga	caccacaaac	agtgggagct	cacaaagacc	180
ctcagagctg	agacaccac	aacagtggga	gctcaciaag	acctcagag	ctgagacacc	240
cacaacagca	cctcgttcag	ctgccacatg	tgtgaataag	gatgcaatgt	ccagaagtgt	300
t						301

<210> 302

<211> 301

<212> DNA

<213> Homo sapien

<400> 302

aggtacacat	ttagcttggt	gtaaatgact	cacaaaactg	attttaaaat	caagttaatg	60
tgaattttga	aaattactac	ttaatcctaa	ttcacaataa	caatggcatt	aaggtttgac	120
ttgagttggt	tcttagtatt	atttatggta	aataggctct	taccacttgc	aaataactgg	180
ccacatcatt	aatgactgac	ttcccagtaa	ggctctctaa	ggggttaagta	ggaggatcca	240
caggatttga	gatgctaagg	ccccagagat	cgtttgatcc	aaccctctta	ttttcagagg	300
g						301

<210> 303

<211> 301

<212> DNA

<213> Homo sapien

<400> 303

aggtaccaac	tgtggaaata	ggtagaggat	cattttttct	ttccatatca	actaagttgt	60
atattgtttt	ttgacagttt	aacacatctt	cttctgtcag	agattctttc	acaatagcac	120
tggctaattg	aactaccgct	tgcattgtta	aaatgggtgt	ttgtgaaatg	atcataggcc	180
agtaacgggt	atgtttttct	aactgatctt	ttgctcgttc	caaagggacc	tcaagacttc	240
catcgatttt	atatctgggg	tctagaaaag	gagttaatct	gttttccctc	ataaattcac	300
c						301

<210> 304

<211> 301

<212> DNA

<213> Homo sapien

<400> 304

acatggatgt	tattttgcag	actgtcaacc	tgaatttgta	tttgcttgac	attgcctaata	60
------------	------------	------------	------------	------------	-------------	----

tattagtttc	agtttcagct	tacccacttt	ttgtctgcaa	catgcaraas	agacagtgcc	120
cttttttagtg	tatcatatca	ggaatcatct	cacattgggt	tgtgccatta	ctgggtgcagt	180
gacttttcagc	cacttgggta	agggtggagtt	ggccatatgt	ctccactgca	aaattactga	240
ttttccctttt	gtaattaata	agtgtgtgtg	tgaagattct	ttgagatgag	gtatatatct	300
c						301

<210> 305
 <211> 301
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(301)
 <223> n = A,T,C or G

<400> 305						
gangtacagc	gtggtcaagg	taacaagaag	aaaaaaatgt	gagtggcatc	ctgggatgag	60
caggggggaca	gacctggaca	gacacgttgt	catttgctgc	tgtgggtagg	aaaatgggcg	120
taaaggagga	gaaacagata	caaaatctcc	aactcagtat	taaggatttc	tcatgcctag	180
aatattggta	gaaacaagaa	tacattcata	tggcaaataa	ctaaccatgg	tggaacaaaa	240
ttctgggatt	taagttggat	accaangaaa	ttgtattaaa	agagctgttc	atggaataag	300
a						301

<210> 306
 <211> 8
 <212> PRT
 <213> Homo sapien

<400> 306
 Val Leu Gly Trp Val Ala Glu Leu
 1 5

<210> 307
 <211> 637
 <212> DNA
 <213> Homo sapien

<400> 307						
acagggratg	aagggaaagg	gagaggatga	ggaagccccc	ctgggggattt	ggttttggtcc	60
ttgtgatcag	gtggtctatg	gggcttatcc	ctacaaagaa	gaatccagaa	ataggggcac	120
attgaggaat	gatacttgag	cccaaagagc	attcaatcat	tgttttattt	gccttmtttt	180
cacaccattg	gtgagggagg	gattaccacc	ctgggggttat	gaagatgggt	gaacacccca	240
cacatagcac	cggagatatg	agatcaacag	tttcttagcc	atagagattc	acagcccaga	300
gcaggaggac	gcttgcacac	catgcaggat	gacatggggg	atgcgctcgg	gattgggtgtg	360
aagaagcaag	gactgttaga	ggcaggcttt	atagtaacaa	gacgggtgggg	caaactctga	420
tttccgtggg	ggaatgtcat	ggtcttgctt	tactaagttt	tgagactggc	aggtagtga	480
actcattagg	ctgagaacct	tgtggaatgc	acttgaccca	sctgatagag	gaagtagcca	540
ggtagggagcc	tttcccagtg	ggtgtggggac	atatctggca	agattttgtg	gcactcctgg	600
ttacagatac	tggggcagca	aataaaaactg	aatcttg			637

<210> 308
 <211> 647
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(647)
 <223> n = A,T,C or G

<400> 308

acgattttca	ttatcatgta	aatcgggtca	ctcaaggggc	caaccacagc	tgggagccac	60
tgctcagggg	aagggtcata	tgggactttc	tactgcccac	ggttctatac	aggatataaa	120
gnggcctcac	agtatagatc	tggtagcaaa	gaagaagaaa	caaacactga	tctctttctg	180
ccacccctct	gacccttttg	aactcctctg	accctttaga	acaagcctac	ctaataatctg	240
ctagagaaaa	gaccaacaac	ggcctcaaaag	gatctcttac	catgaaggtc	tcagctaatt	300
cttggctaag	atgtgggttc	cacattaggt	tctgaatatg	gggggaaggg	tcaatttgct	360
catttttgtg	gtggataaaag	tcaggatgcc	cagggggccag	agcagggggc	tgcttgcttt	420
gggaacaatg	gctgagcata	taaccatagg	ttatggggaa	caaaacaaca	tcaaagtcac	480
tgtatcaatt	gccatgaaga	cttgagggac	ctgaatctac	cgattcatct	taaggcagca	540
ggaccagttt	gagtggcaac	aatgcagcag	cagaatcaat	ggaaacaaca	gaatgattgc	600
aatgtccttt	ttttctcct	gcttctgact	tgataaaaag	ggaccgt		647

<210> 309
 <211> 460
 <212> DNA
 <213> Homo sapien

<400> 309

actttatagt	ttaggctgga	cattggaaaa	aaaaaaaaagc	cagaacaaca	tgtgatagat	60
aatatgattg	gctgcacact	tccagactga	tgaatgatga	acgtgatgga	ctattgtatg	120
gagcacatct	tcagcaagag	ggggaaatac	tcatcatttt	tggccagcag	ttgtttgatc	180
accaaacatc	atgccagaat	actcagcaaa	ccttcttagc	tcttgagaag	tcaaagtccg	240
ggggaattta	ttcctggcaa	ttttaattgg	actccttatg	tgagagcagc	ggctacccag	300
ctgggggtgt	ggagcgaacc	cgtcactagt	ggacatgcag	tggcagagct	cctggtaacc	360
acctagagga	atacacaggc	acatgtgtga	tgccaagcgt	gacacctgta	gcactcaaat	420
ttgtcttggt	tttgtctttc	ggtgtgtaag	attcttaagt			460

<210> 310
 <211> 539
 <212> DNA
 <213> Homo sapien

<400> 310

acgggactta	tcaaataaag	ataggaaaag	aagaaaactc	aaatattata	ggcagaaatg	60
ctaaagggtt	taaaatatgt	caggattgga	agaaggcatg	gataaagaac	aaagttcagt	120
taggaaagag	aaacacagaa	ggaagagaca	caataaaaagt	cattatgtat	tctgtgagaa	180
gtcagacagt	aagattttgt	ggaaatgggt	tggtttgttg	tatgggtatg	attttagcaa	240
taatctttat	ggcagagaaa	gctaaaatcc	tttagcttgc	gtgaatgatc	acttgctgaa	300
ttcctcaagg	taggcatgat	gaaggagggt	ttagaggaga	cacagacaca	atgaactgac	360
ctagatagaa	agccttagta	tactcagcta	ggaatagtga	ttctgagggc	acactgtgac	420
atgattatgt	cattacatgt	atggtagtga	tggggatgat	aggaaggaag	aacttatggc	480
atattttcac	ccccacaaaa	gtcagttaaa	tattggggaca	ctaaccatcc	aggtcaaga	539

<210> 311
 <211> 526
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(526)
 <223> n = A,T,C or G

<400> 311
 caaatttgag ccaatgacat agaattttac aaatcaagaa gcttattctg gggccatttc 60
 ttttgacgtt ttctctaaac tactaaagag gcattaatga tccataaatt atattatcta 120
 catttacagc atttaaaatg tgttcagcat gaaatattag ctacagggga agctaaataa 180
 attaaacatg gaataaagat ttgtccttaa atataatcta caagaagact ttgatatttg 240
 tttttcacia gtgaagcatt cttataaagt gtcataacct ttttggggaa actatgggaa 300
 aaaatgggga aactctgaag ggttttaagt atcttacctg aagctacaga ctccataacc 360
 tctctttaca gggagctcct gcagccccta cagaaatgag tggctgagat tcttgattgc 420
 acagcaagag cttctcatct aaaccctttc cttttttagt atctgtgtat caagtataaa 480
 agttctataa actgtagtnt acttatttta atccccaaag cacagt 526

<210> 312
 <211> 500
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(500)
 <223> n = A,T,C or G

<400> 312
 cctctctctc cccaccccct gactctagag aactggggtt tctcccagta ctccagcaat 60
 tcatttctga aagcagttga gccactttat tccaaagtac actgcagatg ttcaaactct 120
 ccatttctct ttccttcca cctgccagtt ttgctgactc tcaacttgtc atgagtgtaa 180
 gcattaagga cattatgctt cttcgattct gaagacaggc cctgctcatg gatgactctg 240
 gcttcttagg aaaatatatt tcttccaaaa tcagtaggaa atctaaactt atccccctct 300
 tgcagatgtc tagcagcttc agacatttgg ttaagaacct atgggaaaaa aaaaaatcct 360
 tgctaattg gtttcctttg taaaccanga ttcttatttg nctggatatag aatatcagct 420
 ctgaacgtgt ggtaaagatt tttgtgtttg aatataggag aaatcagttt gctgaaaagt 480
 tagtcttaat tatctattgg 500

<210> 313
 <211> 718
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(718)
 <223> n = A,T,C or G

<400> 313
 ggagatttgt gtggtttgca gccgagggag accaggaaga tctgcatggt gggaaggacc 60
 tgatgatata gaggtgagaa ataagaaagg ctgctgactt taccatctga ggccacacat 120
 ctgctgaaat ggagataatt aacatcacta gaaacagcaa gatgacaata taatgtctaa 180
 gtagtgacat gtttttgcac atttccagcc cttttaaaata tccacacaca caggaagcac 240
 aaaaggaagc acagagatcc ctgggagaaa tgccccggccg ccactctggg tcatcgatga 300
 gcctcgccct gtgcctgntc ccgcttgtga gggaaggaca ttagaaaatg aattgatgtg 360
 ttccttaaaag gatggcagga aaacagatcc tgttgtggat atttatttga acgggattac 420

agatttgaaa tgaagtcaca aagtgagcat taccaatgag aggaaaacag acgagaaaat	480
cttgatgggt cacaagacat gcaacaaaca aaatggaata ctgtgatgac acgagcagcc	540
aactggggag gagataccac ggggcagagg tcaggattct ggccctgctg cctaactgtg	600
cgttatacca atcatttcta tttctaccct caaacaagct gtngaataac tgacttacgg	660
ttcttntggc ccacattttc atnatccacc cntcntttt aannttantc caaantgt	718

<210> 314

<211> 358

<212> DNA

<213> Homo sapien

<400> 314

gtttatttac attacagaaa aaacatcaag acaatgtata ctatttcaaa tatatccata	60
cataatcaaa tatagctgta gtacatgttt tcattgggtg agattaccac aaatgcaagg	120
caacatgtgt agatctcttg tcttattctt ttgtctataa tactgtattg tgtagtccaa	180
gctctcggta gtccagccac tgtgaaacat gctcccttta gattaacctc gtggacgctc	240
ttgttgatt gctgaactgt agtgccctgt attttgcttc tgtctgtgaa ttctgttget	300
tctggggcat ttccttgatga tgcagaggac caccacacag atgacagcaa tctgaatt	358

<210> 315

<211> 341

<212> DNA

<213> Homo sapien

<400> 315

taccacctcc ccgctggcac tgatgagccg catcaccatg gtcaccagca ccatgaaggc	60
ataggtgatg atgaggacat ggaatgggcc cccaaggatg gtctgtccaa agaagcgagt	120
gacccccatt ctgaagatgt ctggaacctc taccagcagg atgatgatag cccaatgac	180
agtcaccagc tccccgacca gccggatata gtccttaggg gtcattgtag ctctctgaag	240
tagcttctgc tgtaagaggg tggtgtcccg ggggctcgtg cggttattgg tcttgggctt	300
gagggggcgg tagatgcagc acatggtgaa gcagatgatg t	341

<210> 316

<211> 151

<212> DNA

<213> Homo sapien

<400> 316

agactgggca agactcttac gccccacact gcaatttggt cttgttgccg tatccattta	60
tgtgggcctt tctcgagttt ctgattataa acaccactgg agcgatgtgt tgactggact	120
cattcagggga gctctggttg caatattagt t	151

<210> 317

<211> 151

<212> DNA

<213> Homo sapien

<400> 317

agaactagtg gatcctaagt aaatacctga aacatatatt ggcatttata aatgggctcaa	60
atcttcatat atctctggcc ttaaccctgg ctcttgaggc tgcggccagc agatcccagg	120
ccagggctct gttcttgcca cacctgcttg a	151

<210> 318

<211> 151

<212> DNA

<213> Homo sapien

<400> 318

actggtggga ggcgctgttt agttggctgt tttcagaggg gtcttttcgga gggacctcct	60
gctgcaggct ggagtgtctt tattcctggc gggagaccgc acattccact gctgaggctg	120
tgggggcggg ttatcaggca gtgataaaca t	151

<210> 319

<211> 151

<212> DNA

<213> Homo sapien

<400> 319

aactagtggga tccagagcta taggtacagt gtgatctcag ctttgcaaac acattttcta	60
catagatagt actaggtatt aatagatatg taaagaaaga aatcacacca ttaataatgg	120
taagattggg tttatgtgat tttagtgggt a	151

<210> 320

<211> 150

<212> DNA

<213> Homo sapien

<400> 320

aactagtggga tccactagtc cagtgtgggtg gaattccatt gtggtggggt tctagatcgc	60
gagcggctgc cctttttttt ttttttttg ggggggaatt tttttttttt aatagttatt	120
gagtgttcta cagcttacag taaataccat	150

<210> 321

<211> 151

<212> DNA

<213> Homo sapien

<400> 321

agcaactttg tttttcatcc aggttatctt aggcttagga tttcctctca cactgcagtt	60
taggggtggca ttgtaaccag ctatggcata ggtgttaacc aaaggctgag taaacatggg	120
tgcctctgag aaatcaaagt cttcatacac t	151

<210> 322

<211> 151

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(151)

<223> n = A,T,C or G

<400> 322

atccagcadc ttctcctggt tcttgccctc cttttctctc ttcttasatt ctgcttgagg	60
tttgggcttg gtcagtttgc cacagggtt ggagatgggt acagtcttct ggcattcggc	120
attgtgcagg gctcgttca nacttccagt t	151

<210> 323

<211> 151

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(151)

<223> n = A,T,C or G

<400> 323

tgaggacttg tktttctttt ctttattttt aatcctctta ckttgtaa	atattgccta	60
nagactcant tactaccag tttgtggtt twtgggagaa atgtaactgg	acagtttagct	120
gttcaatyaa aaagacactt ancccatgtg g		151

<210> 324

<211> 461

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(461)

<223> n = A,T,C or G

<400> 324

acctgtgtgg aatttcagct ttctcatgc aaaaggattt tgtatccccg	gcctacttga	60
agaagtgggc agctaaagga atccagggtg ttggttgac tgtaataacc	tttgatgaaa	120
agagttacta cgaatcccat cttggttcca gctatatcac tgacagcatg	gtagaagact	180
gcgaacctca cttctagact ttcacgggtg gacgaaacgg gtccagaaac	tgccaggggc	240
ctcatacagg gatatacaaaa taccctttgt gctaccagg cctggggaa	tcaggtgact	300
cacacaaatg caatagttgg tcaactgcatt tttacctgaa ccaaagctaa	acccggtgtt	360
gccaccatgc accatggcat gccagagttc aacactgttg ctcttgaaaa	ttgggtctga	420
aaaaacgcac aagagcccct gccctgccct agctgangca c		461

<210> 325

<211> 400

<212> DNA

<213> Homo sapien

<400> 325

acactgtttc catgttatgt ttctacacat tgctacctca gtgctcctgg	aaacttagct	60
tttgatgtct ccaagtagtc caccttcatt taactctttg aaactgtatc	atctttgcca	120
agtaagagtg gtggcctatt tcagctgctt tgacaaaatg actggctcct	gacttaacgt	180
tctataaatg aatgtgctga agcaaagtgc ccatgggtggc ggcgaagaag	agaaagatgt	240
gttttgttt ggactctctg tggctccctc caatgctgtg gggttccaac	caggggaagg	300
gtcccttttg cattgccaag tgccataacc atgagcacta cgctaccatg	gttctgcctc	360
ctggccaagc aggctgggtt gcaagaatga aatgaatgat		400

<210> 326

<211> 1215

<212> DNA

<213> Homo sapien

<400> 326

ggaggactgc agcccgact cgcagccctg gcaggcgga ctggtcatgg	aaaacgaatt	60
gttctgctcg ggcgtcctgg tgcacccgca gtgggtgctg tcagccgcac	actgtttcca	120
gaactcctac accatcgggc tgggcctgca cagtcttgag gccgaccaag	agccagggag	180

ccagatggtg	gaggccagcc	tctccgtacg	gcacccagag	tacaacagac	ccttgctcgc	240
taacgacctc	atgctcatca	agttggacga	atccgtgtcc	gagtctgaca	ccatccggag	300
catcagcatt	gcttcgcagt	gccctaccgc	ggggaactct	tgctctggtt	ctggctgggg	360
tctgctggcg	aacggcagaa	tgctaccgt	gctgcagtgc	gtgaacgtgt	cggtaggtgtc	420
tgaggaggtc	tgagtaagc	tctatgaccc	gctgtaccac	cccagcatgt	tctgcgccgg	480
cggagggcaa	gaccagaagg	actcctgcaa	cggtagactct	ggggggcccc	tgatctgcaa	540
cgggtacttg	cagggccttg	tgtctttcgg	aaaagccccg	tgtggccaag	ttggcgtgcc	600
aggtgtctac	accaacctct	gcaaattcac	tgagtggata	gagaaaaccg	tccaggccag	660
ttaactctgg	ggactgggaa	cccataaaat	tgacccccaa	atacatcctg	cgggaaggaa	720
tcaggaatat	ctgttcccag	cccctcctcc	ctcaggccca	ggagtccagg	ccccagcccc	780
ctcctccctc	aaaccaaggg	tacagatccc	cagccccctc	tccctcagac	ccaggagtcc	840
agacccccca	gccccctcct	cctcagaccc	aggagtccag	cccctcctcc	ctcagaccca	900
ggagtccaga	ccccccagcc	cctcctccct	cagacccagg	ggtccaggcc	ccccacccct	960
cctccctcag	actcagaggt	ccaagccccc	aaccctcctc	tccccagacc	cagagggtcca	1020
ggtcccagcc	cctcctccct	cagacccagc	ggtccaatgc	cacctagact	ctccctgtac	1080
acagtgcccc	cttgtggcac	gttgacccaa	ccttaccagt	tggtttttca	ttttttgtcc	1140
ctttccctta	gatccagaaa	taaagtctaa	gagaagcgca	aaaaaaaaaa	aaaaaaaaaa	1200
aaaaaaaaaa	aaaaaa					1215

<210> 327

<211> 220

<212> PRT

<213> Homo sapien

<400> 327

Glu	Asp	Cys	Ser	Pro	His	Ser	Gln	Pro	Trp	Gln	Ala	Ala	Leu	Val	Met
1				5				10					15		
Glu	Asn	Glu	Leu	Phe	Cys	Ser	Gly	Val	Leu	Val	His	Pro	Gln	Trp	Val
			20				25					30			
Leu	Ser	Ala	Ala	His	Cys	Phe	Gln	Asn	Ser	Tyr	Thr	Ile	Gly	Leu	Gly
		35				40					45				
Leu	His	Ser	Leu	Glu	Ala	Asp	Gln	Glu	Pro	Gly	Ser	Gln	Met	Val	Glu
	50					55				60					
Ala	Ser	Leu	Ser	Val	Arg	His	Pro	Glu	Tyr	Asn	Arg	Pro	Leu	Leu	Ala
65				70						75					80
Asn	Asp	Leu	Met	Leu	Ile	Lys	Leu	Asp	Glu	Ser	Val	Ser	Glu	Ser	Asp
			85					90					95		
Thr	Ile	Arg	Ser	Ile	Ser	Ile	Ala	Ser	Gln	Cys	Pro	Thr	Ala	Gly	Asn
		100					105					110			
Ser	Cys	Leu	Val	Ser	Gly	Trp	Gly	Leu	Leu	Ala	Asn	Gly	Arg	Met	Pro
	115				120						125				
Thr	Val	Leu	Gln	Cys	Val	Asn	Val	Ser	Val	Val	Ser	Glu	Glu	Val	Cys
	130				135						140				
Ser	Lys	Leu	Tyr	Asp	Pro	Leu	Tyr	His	Pro	Ser	Met	Phe	Cys	Ala	Gly
145				150						155					160
Gly	Gly	Gln	Asp	Gln	Lys	Asp	Ser	Cys	Asn	Gly	Asp	Ser	Gly	Gly	Pro
		165						170					175		
Leu	Ile	Cys	Asn	Gly	Tyr	Leu	Gln	Gly	Leu	Val	Ser	Phe	Gly	Lys	Ala
		180					185					190			
Pro	Cys	Gly	Gln	Val	Gly	Val	Pro	Gly	Val	Tyr	Thr	Asn	Leu	Cys	Lys
	195					200						205			
Phe	Thr	Glu	Trp	Ile	Glu	Lys	Thr	Val	Gln	Ala	Ser				
	210					215					220				

<210> 328

<211> 234
 <212> DNA
 <213> Homo sapien

<400> 328
 cgctcgtctc tggtagctgc agccaaatca taaacggcga ggactgcagc ccgcactcgc 60
 agccctggca ggcggcactg gtcattgaaa acgaattgtt ctgctcgggc gtcttggtgc 120
 atccgcagtg ggtgctgtca gccacacact gtttccagaa ctctacacc atcgggctgg 180
 gcctgcacag tcttgaggcc gaccaagagc cagggagcca gatggtggag gccca 234

<210> 329
 <211> 77
 <212> PRT
 <213> Homo sapien

<400> 329
 Leu Val Ser Gly Ser Cys Ser Gln Ile Ile Asn Gly Glu Asp Cys Ser
 1 5 10 15
 Pro His Ser Gln Pro Trp Gln Ala Ala Leu Val Met Glu Asn Glu Leu
 20 25 30
 Phe Cys Ser Gly Val Leu Val His Pro Gln Trp Val Leu Ser Ala Thr
 35 40 45
 His Cys Phe Gln Asn Ser Tyr Thr Ile Gly Leu Gly Leu His Ser Leu
 50 55 60
 Glu Ala Asp Gln Glu Pro Gly Ser Gln Met Val Glu Ala
 65 70 75

<210> 330
 <211> 70
 <212> DNA
 <213> Homo sapien

<400> 330
 cccaacacaa tggcccgatc ccattcctga ctccgccctc aggatcgctc gtctctggta 60
 gctgcagcca 70

<210> 331
 <211> 22
 <212> PRT
 <213> Homo sapien

<400> 331
 Gln His Asn Gly Pro Ile Pro Ser Leu Thr Pro Pro Ser Gly Ser Leu
 1 5 10 15
 Val Ser Gly Ser Cys Ser
 20

<210> 332
 <211> 2507
 <212> DNA
 <213> Homo sapien

<400> 332
 tgggtgccgct gcagccggca gagatgggtg agctcatgtt cccgctgttg ctctccttc 60
 tgcccttct tctgtatatg gctgcgcccc aaatcaggaa aatgctgtcc agtggggtgt 120

gtacatcaac	tgttcagctt	cctgggaaaag	tagttgtggt	cacaggagct	aatacaggta	180
tcgggaagga	gacagccaaa	gagctggctc	agagaggagc	tcgagtatat	ttagcttgcc	240
gggatgtgga	aaagggggaa	ttggtggcca	aagagatcca	gaccacgaca	gggaaccagc	300
aggtgttggg	gcggaaactg	gacctgtctg	atactaagtc	tattcgagct	tttgctaagg	360
gcttcttagc	tgaggaaaag	cacctccacg	ttttgatcaa	caatgcagga	gtgatgatgt	420
gtccgtactc	gaagacagca	gatggctttg	agatgcacat	aggagtcaac	cacttgggtc	480
acttcctcct	aacctatctg	ctgctagaga	aactaaagga	atcagcccca	tcaaggatag	540
taaatgtgtc	ttccctcgca	catcacctgg	gaaggatcca	cttccataac	ctgcaggggc	600
agaaattcta	caatgcaggc	ctggcctact	gtcacagcaa	gctagccaac	atcctcttca	660
cccaggaact	ggcccggaga	ctaaaaggct	ctggcgttac	gacgtattct	gtacaccctg	720
gcacagtcca	atctgaactg	gttcggcact	catctttcat	gagatggatg	tgggtggcttt	780
tctccttttt	catcaagact	cctcagcagg	gagcccagac	cagcctgcac	tgtgccttaa	840
cagaaggtct	tgagattcta	agtgggaatc	atttcagtga	ctgtcatgtg	gcatgggtct	900
ctgcccgaagc	tcgtaatgag	actatagcaa	ggcggtctgt	ggacgtcagt	tgtgacctgc	960
tgggcctccc	aatagactaa	caggcagtgc	cagttggacc	caagagaaga	ctgcagcaga	1020
ctacacagta	cttcttgtca	aaatgattct	ccttcaaggt	tttcaaaacc	tttagcacia	1080
agagagcaaaa	accttcacagc	cttgccctgct	tgggtgtccag	ttaaaactca	gtgtactgcc	1140
agattcgtct	aaatgtctgt	catgtccaga	tttactttgc	ttctgttact	gccagagtta	1200
ctagagatat	cataatatga	taagaagacc	ctcatatgac	ctgcacagct	cattttcctt	1260
ctgaaagaaa	ctactaccta	ggagaatcta	agctatagca	gggatgattt	atgcaaattt	1320
gaactagctt	ctttgttcac	aattcagttc	ctcccaacca	accagtcttc	acttcaagag	1380
ggccacactg	caacctcagc	ttaacatgaa	taacaaagac	tggctcagga	gcaggggcttg	1440
cccaggcatg	gtggatcacc	ggaggtcagt	agttcaagac	cagcctggcc	aacatgggtga	1500
aacccccact	ctactaaaaa	ttgtgtatat	ctttgtgtgt	cttcctgttt	atgtgtgcca	1560
agggagtatt	ttcacaaaag	tcaaaacagc	cacaataatc	agagatggag	caaaccagtg	1620
ccatccagtc	tttatgcaaa	tgaaatgctg	caaagggaag	cagattctgt	atatgttggg	1680
aactaccac	caagagcaca	tgggtagcag	ggaagaagta	aaaaaayaga	aggagaatac	1740
tggaagataa	tgcacaaaat	gaagggacta	gttaaggatt	aactagccct	ttaaggatta	1800
actagttaag	gattaatagc	aaaagayatt	aaatatgcta	acatagctat	ggaggaattg	1860
agggcaagca	cccaggactg	atgaggtctt	aacaaaaacc	agtgtggcaa	aaaaaataaa	1920
aaaaaaaaaa	aaaaatccta	aaaacaaaca	aacaaaaaaa	acaattcttc	attcagaaaa	1980
attatcttag	ggactgatat	tggtaattat	ggtcaattta	ataatatttt	ggggcatttc	2040
cttacattgt	cttgacaaga	ttaaaatgtc	tgtgccccaa	ttttgtattt	tatttgagga	2100
cttcttatca	aaagtaatgc	tgccaaagga	agtctaagga	attagtagtg	ttcccatcac	2160
ttgtttggag	tgtgctattc	taaaagattt	tgatttcctg	gaatgacaat	tatattttaa	2220
ctttgggtggg	ggaaagagtt	ataggaccac	agtcttcact	tctgatactt	gtaaattaat	2280
cttttattgc	acttgttttg	accattaagc	tatatgttta	gaaatgggtca	ttttacggaa	2340
aaattagaaa	aattctgata	atagtgcaga	ataaatgaat	taatgtttta	cttaatttat	2400
attgaactgt	caatgacaaa	taaaaattct	ttttgattat	tttttgtttt	catttaccag	2460
aataaaaaacg	taagaattaa	aagtttgatt	acaaaaaaaa	aaaaaaa		2507

<210> 333

<211> 3030

<212> DNA

<213> Homo sapien

<400> 333

gcaggcgact	tgcgagctgg	gagcgattta	aaacgctttg	gattcccccg	gcctgggtgg	60
ggagagcgag	ctgggtgccc	cctagattcc	ccgccccgc	acctcatgag	ccgacctcg	120
gctccatgga	gccccgcaat	tatgccacct	tggatggagc	caaggatata	gaaggcttgc	180
tgggagcggg	agggggggcg	aatctggtcg	cccactcccc	tctgaccagc	caccacggcg	240
cgctacgct	gatgcctgct	gtcaactatg	cccccttggg	tctgccaggc	tcggcggagc	300
cgccaaagca	atgccacca	tgccctgggg	tgccccaggg	gacgtcccca	gctcccgtgc	360
cttatggta	ctttggaggc	gggtactact	cctgccgagt	gtcccggagc	tcgctgaaac	420
cctgtgcccc	ggcagccacc	ctggccgcgt	accccgcgga	gactcccacg	gccggggaag	480

agtacccag	ycgccccact	gagtttgct	tctatccggg	atatccggga	acctaccagc	540
ctatggccag	ttacctggac	gtgtctgtgg	tgcagactct	gggtgctcct	ggagaaccgc	600
gacatgactc	cctgttgct	gtggacagtt	accagtcttg	ggctctcgct	ggaggctgga	660
acagccagat	gtgttgccag	ggagaacaga	acccaccagg	tcccttttgg	aaggcagcat	720
ttgcagactc	cagcgggag	caccctcctg	acgcctgcgc	ctttcgtcgc	ggccgcaaga	780
aacgcattcc	gtacagcaag	gggcagttgc	gggagctgga	gcgggagtat	gcggctaaca	840
agttcatcac	caaggacaag	aggcgcaaga	tctcggcagc	caccagcctc	tcggagcgcc	900
agattaccat	ctggttttcag	aaccgcccgg	tcaaagagaa	gaagggttctc	gccaaggtga	960
agaacagcgc	taccctttaa	gagatctcct	tgcctgggtg	ggaggagcga	aagtgggggt	1020
gtcctgggga	gaccaggaac	ctgccaagcc	caggctgggg	ccaaggactc	tgctgagagg	1080
cccctagaga	caacaccctt	cccaggccac	tggctgctgg	actgttctct	aggagcgcc	1140
tgggtaccca	gtatgtgcag	ggagacggaa	ccccatgtga	cagccactc	caccagggtt	1200
cccaaagaac	ctggcccagt	cataatcatt	catcctgaca	gtggcaataa	tcacgataac	1260
cagtactagc	tgccatgatc	gttagcctca	tattttctat	ctagagctct	gtagagcact	1320
ttagaaaaccg	ctttcatgaa	ttgagctaat	tatgaataaa	tttggaaggc	gatccctttg	1380
cagggaaagct	ttctctcaga	cccccttcca	ttacacctct	caccctggta	acagcaggaa	1440
gactgaggag	aggggaacgg	gcagattcgt	tgtgtggctg	tgatgtccgt	ttagcatttt	1500
tctcagctga	cagctgggta	ggtggacaat	tgtagaggct	gtctcttctc	ccctccttgt	1560
ccaccccata	gggtgtacce	actggtcttg	gaagcaccca	tccttaatac	gatgattttt	1620
ctgtcgtgtg	aaaatgaagc	cagcaggctg	cccctagtca	gtccttctct	ccagagaaaa	1680
agagatttga	gaaagtgcct	gggtaattca	ccattaattt	cctcccccaa	actctctgag	1740
tcttccctta	atatttctgg	tgggtctgac	caaagcaggt	catggtttgt	tgagcatttg	1800
ggatcccagt	gaagtagatg	tttgtagcct	tgcatactta	gcccttccca	ggcaciaacg	1860
gagtggcaga	gtggtgcca	ccctgttttc	ccagtccacg	tagacagatt	cacagtgcgg	1920
aattctggaa	gctggagaca	gacgggctct	ttgcagagcc	gggactctga	gagggacatg	1980
agggcctctg	cctctgtgtt	cattctctga	tgtcctgtac	ctgggctcag	tgcccggtgg	2040
gactcatctc	ctggccgcgc	agcaaagcca	gcgggttcgt	gctggctcct	cctgcacctt	2100
aggctggggg	tggggggcct	gccggcgcat	tctccacgat	tgagcgcaca	ggcctgaagt	2160
ctggacaacc	cgcagaaccg	aagctccgag	cagcgggtcg	gtggcgagta	gtggggctcg	2220
tggcgagcag	ttggtgggtg	gccgcggccg	ccactacctc	gaggacattt	ccctcccggg	2280
gccagctctc	ctagaaaccc	cgcggcggcc	gccgcagcca	agtgtttatg	gcccgcggtc	2340
gggtgggata	ctagccctgt	ctcctctcct	gggaaggagt	gagggtggga	cgtgacttag	2400
acacctacaa	atctattttac	caaagaggag	cccgggactg	agggaaaagg	ccaaagagtg	2460
tgagtgcata	cggactgggg	gttcagggga	agaggacgag	gaggaggaag	atgagggtcga	2520
tttcttgatt	taaaaaatcg	tccaagcccc	gtggtccagc	ttaaggctct	cggttacatg	2580
cgcgcgtcag	agcagggtcac	tttctgcctt	ccacgtcctc	cttcaaggaa	gccccatgtg	2640
ggtagctttc	aatatcgcag	gttcttactc	ctctgcctct	ataagctcaa	acccaccaac	2700
gatcgggcaa	gtaaaccccc	tcctctgcgc	acttcggaac	tggcgagagt	tcagcgacaga	2760
tgggcctgtg	gggagggggc	aagatagatg	agggggagcg	gcatgggtcg	gggtgacccc	2820
ttggagagag	gaaaaaggcc	acaagagggg	ctgccaccgc	cactaacgga	gatggccctg	2880
gtagagacct	ttgggggtct	ggaacctctg	gactcccat	gctctaactc	ccacactctg	2940
ctatcagaaa	cttaaacctg	aggattttct	ctgtttttca	ctcgcaataa	aytcagagca	3000
aacaaaaaaa	aaaaaaaaaa	aaaactcgag				3030

<210> 334

<211> 2417

<212> DNA

<213> Homo sapien

<400> 334

ggcggccgct	ctagagctag	tgggatcccc	cgggctgcac	gaattcggca	cgagtgagtt	60
ggagttttac	ctgtattgtt	ttaatttcaa	caagcctgag	gactagccac	aaatgtaccc	120
agttttacaaa	tgaggaaaca	ggtgcaaaaa	ggttgttacc	tgtcaaagg	cgtatgtggc	180
agagccaaga	tttgagccca	gttatgtctg	atgaacttag	cctatgctct	ttaaacttct	240
gaatgctgac	cattgaggat	atctaaactt	agatcaattg	cattttccct	ccaagactat	300

ttacttatca	atacaataat	accaccttta	ccaatctatt	gttttgatac	gagactcaaa	360
tatgccagat	atatgtaaaa	gcaacctaca	agctctctaa	tcatgctcac	ctaaaagatt	420
cccgggatct	aatagggtca	aagaaacttc	ttctagaaat	ataaaaagaga	aaattggatt	480
atgcaaaaat	tcattattaa	tttttttcat	ccatccttta	attcagcaaa	catttatctg	540
ttgttgactt	tatgcagtat	ggccttttaa	ggattggggg	acaggtgaag	aacgggggtgc	600
cagaatgcat	cctcctacta	atgagggtcag	tacacatttg	catttttaaaa	tgccctgtcc	660
agctgggcat	ggtggatcat	gcctgtaatc	tcaacattgg	aaggccaagg	caggaggatt	720
gcttcagccc	aggagttcaa	gaccagcctg	ggcaacatag	aaagacccca	tctctcaatc	780
aatcaatcaa	tgccctgtct	ttgaaaataa	aactctttaa	gaaaggttta	atgggcaggg	840
tgtggtagct	catgcctata	atacagcact	ttgggaggct	gaggcaggag	gatcacttta	900
gcccagaagt	tcaagaccag	cctgggcaac	aagtgcacac	tcactctcaat	tttttaataa	960
aatgaataca	tacataagga	aagataaaaa	gaaaagttta	atgaaagaat	acagtataaa	1020
acaaatctct	tggacctaaa	agtatttttg	ttcaagccaa	atattgtgaa	tcacctctct	1080
gtgttgagga	tacagaatat	ctaagcccag	gaaactgagc	agaaagttca	tgtactaact	1140
aatcaacccg	aggcaaggca	aaaatgagac	taactaatca	atccgaggca	agggggcaaat	1200
tagacggaac	ctgactctgg	tctattaagc	gacaactttc	cctctgttgt	atttttcttt	1260
tattcaatgt	aaaaggataa	aaactctcta	aaactaaaaa	caatgtttgt	caggagttac	1320
aaaccatgac	caactaatta	tggggaatca	taaaatatga	ctgtatgaga	tcttgatggt	1380
ttacaaagtg	tacccactgt	taatcacttt	aaacattaat	gaacttaaaa	atgaatttac	1440
ggagattgga	atgtttcttt	cctgttgtat	tagttggctc	aggctgccat	aacaaaatac	1500
cacagactgg	gaggcttaag	taacagaaat	tcatttctca	cagttctggg	ggctggaagt	1560
ccacgatcaa	ggtgcaggaa	aggcaggctt	cattctgagg	cccctctctt	ggctcacatg	1620
tggccaccct	cccactgctg	gctcacatga	cctcttttgt	ctcctggaaa	gagggtgtgg	1680
gggacagagg	gaaagagaag	gagagggaac	tctctggtgt	ctcgtctttc	aaggacccta	1740
acctgggcca	ctttggccca	ggcactgtgg	ggtggggggg	tgtggctgct	ctgctctgag	1800
tggccaagat	aaagcaacag	aaaaatgtcc	aaagctgtgc	agcaaagaca	agccaccgaa	1860
cagggatctg	ctcatcagtg	tggggacctc	caagtgggcc	accctggagg	caagccccca	1920
cagagcccat	gcaagggtgg	agcagcagaa	gaagggaatt	gtccctgtcc	tgggcacatt	1980
cctcaccgac	ctggtgatgc	tggacactgc	gatgaatggt	aatgtggatg	agaatatgat	2040
ggactcccag	aaaaggagac	ccagctgctc	aggtggctgc	aaatcattac	agccttcatac	2100
ctggggagga	actggggggc	tggttctggg	tcagagagca	gcccagttag	ggtgagagct	2160
acagcctgtc	ctgccagctg	gatccccagt	cccggctcaac	cagtaatcaa	ggctgagcag	2220
atcaggcttc	ccggagctgg	tcttgggaag	ccagccctgg	ggtgagttgg	ctcctgctgt	2280
ggtactgaga	caatattgtc	ataaattcaa	tgcgcccttg	tatccctttt	tcttttttat	2340
ctgtctacat	ctataatcac	tatgcatact	agtcttttgt	agtgtttcta	ttcmacttaa	2400
tagagatatg	ttataact					2417

<210> 335

<211> 2984

<212> DNA

<213> Homo sapien

<400> 335

atccctcctt	ccccactctc	ctttccagaa	ggcacttggg	gtcttatctg	ttggactctg	60
aaaacacttc	aggcgccctt	ccaaggcttc	cccaaaccct	taagcagccg	cagaagcgct	120
cccagagctgc	cttctccac	actcagggtga	tgcagttgga	gaggaaagttc	agccatcaga	180
agtacctgtc	ggccctgaa	cgggcccacc	tggccaagaa	cctcaagctc	acggagaccc	240
aagtgaagat	atggttccag	aacagacgct	ataagactaa	gcgaaagcag	ctctcctcgg	300
agctgggaga	cttggaagaag	cactcctctt	tgccggccct	gaaagaggag	gccttctccc	360
gggcctccct	ggtctccgtg	tataacagct	atccttacta	cccatacctg	tactgcgtgg	420
gcagctggag	cccagctttt	tggtaatgcc	agctcagggtg	acaaccatta	tgatcaaaaa	480
ctgccttccc	cagggtgtct	ctatgaaaag	cacaaggggc	caaggtcagg	gagcaagagg	540
tgtgcacacc	aaagctattg	gagatttgcg	tggaaatctc	asattcttca	ctggtgagac	600
aatgaaacaa	cagagacagt	gaaagtttta	atacctaagt	cattccccc	gtgcatactg	660
taggtcattt	tttttgcttc	tggctacctg	tttgaagggg	agagagggaa	aatcaagtgg	720

tat	ttttccag	cactttgtat	gattttggat	gagctgtaca	cccaaggatt	ctgttctgca	780
act	ccatcct	cctgtgtcac	tgaatatcaa	ctctgaaaga	gcaaacctaa	caggagaaag	840
gaca	accagg	atgaggatgt	caccaactga	attaaactta	agtcagaaag	cctcctgttg	900
gcctt	ggaat	atggccaagg	ctctctctgt	ccctgtaaaa	gagaggggca	aatagagagt	960
ctcca	agaga	acgccctcat	gctcagcaca	tatttgcacg	ggagggggag	atgggtggga	1020
ggagat	gaaa	atatcagctt	ttcttattcc	tttttattcc	ttttaaaatg	gtatgccaac	1080
ttaagt	tattt	acaggggtggc	ccaaatagaa	caagatgcac	tcgctgtgat	tttaagacaa	1140
gctgtata	aaa	cagaactcca	ctgcaagagg	gggggcccggg	ccaggagaat	ctccgcttgt	1200
ccaagac	agg	ggcctaagga	gggtctccac	actgctgcta	ggggctgttg	cattttttta	1260
ttagtaga	aaa	gtggaaaggc	ctctttctcaa	ctttttttccc	ttgggctgga	gaatttagaa	1320
tcagaagt	ttt	cctggagttt	tcaggctatc	atatatactg	tatcctgaaa	ggcaacataa	1380
ttcttcct	ttc	cctcctttta	aaattttgtg	ttcctttttg	cagcaattac	tcactaaagg	1440
gcttcatt	ttt	agtccagatt	tttagtctgg	ctgcacctaa	cttatgcctc	gcttatttag	1500
cccagat	ctt	ggcttttttt	tttttttttt	tttttccgtc	tcccaaaagc	tttatctgtc	1560
ttgact	ttttt	aaaaaagttt	gggggagat	tctgaattgg	ctaaaagaca	tgcattttta	1620
aaactag	caa	ctcttatttc	tttcctttta	aaatacatag	cattaaatcc	caaactctat	1680
ttaaag	acct	gacagcttga	gaaggctact	actgcattta	taggaccttc	tggtgggtct	1740
gctgttac	gct	ttgaagtctg	acaatccttg	agaatctttg	catgcagagg	aggtaagagg	1800
tattggat	ttt	tcacagagga	agaacacagc	gcagaatgaa	gggccaggct	tactgagctg	1860
tccagtgg	gag	ggctcatggg	tgggacatgg	aaaagaaggc	agcctaggcc	ctggggagcc	1920
cagtccact	g	agcaagcaag	ggactgagtg	agccttttgc	aggaaaaggc	taagaaaaag	1980
gaaaaccat	t	ctaaaacaca	acaagaaact	gtccaaatgc	tttgggaact	gtgtttattg	2040
cctataat	gg	gtccccaata	tgggtaacct	agacttcaga	gagaatgagc	agagagcaaa	2100
ggagaaa	atct	ggctgtcctt	ccatttttcat	tctgttatct	caggtagagct	ggtagagggg	2160
agacatt	aga	aaaaaatgaa	acaacaaaac	aattactaat	gaggtacgct	gaggcctggg	2220
agtctct	tga	ctccactact	taattccgtt	tagtgagaaa	cctttcaatt	ttcttttatt	2280
agaaggg	cca	gcttactgtt	ggtggcaaaa	ttgccaacat	aagttaatag	aaagttggcc	2340
aatttcac	ccc	catttttctgt	ggtttgggct	ccacattgca	atgttcaatg	ccacgtgctg	2400
ctgacac	cga	ccggagtact	agccagcaca	aaaggcaggg	tagcctgaat	tgctttctgc	2460
tctttac	att	tcttttaaaa	taagcattta	gtgctcagtc	cctactgagt	actctttctc	2520
tccctct	cctc	tgaatttaat	tctttcaact	tgcaatttgc	aaggattaca	catttctactg	2580
tgatgtat	at	tgtgttgcaa	aaaaaaaaaa	aagtgtcttt	gtttaaaatt	acttggtttg	2640
tgaatcc	atc	ttgctttttc	ccatttgga	ctagtcat	acccatctct	gaactggtag	2700
aaaaacat	ct	gaagagctag	tctatcagca	tctgacaggt	gaattggatg	gttctcagaa	2760
ccatttc	cacc	cagacagcct	gtttctatcc	tgtttaataa	attagtttgg	gttctctaca	2820
tgcataa	caa	accctgctcc	aatctgtcac	ataaaagtct	gtgacttgaa	gtttagtcag	2880
caccccc	cacc	aaactttatt	tttctatgtg	ttttttgcaa	catatgagtg	ttttgaaaat	2940
aaagtac	cca	tgtctttatt	agaaaaaaa	aaaaaaaaaa	aaaa		2984

<210> 336

<211> 147

<212> PRT

<213> Homo sapien

<400> 336

Pro	Ser	Phe	Pro	Thr	Leu	Leu	Ser	Arg	Arg	His	Leu	Gly	Ser	Tyr	Leu
1			5					10					15		
Leu	Asp	Ser	Glu	Asn	Thr	Ser	Gly	Ala	Leu	Pro	Arg	Leu	Pro	Gln	Thr
			20					25					30		
Pro	Lys	Gln	Pro	Gln	Lys	Arg	Ser	Arg	Ala	Ala	Phe	Ser	His	Thr	Gln
			35					40					45		
Val	Ile	Glu	Leu	Glu	Arg	Lys	Phe	Ser	His	Gln	Lys	Tyr	Leu	Ser	Ala
			50					55				60			
Pro	Glu	Arg	Ala	His	Leu	Ala	Lys	Asn	Leu	Lys	Leu	Thr	Glu	Thr	Gln
65					70					75					80

Val Lys Ile Trp Phe Gln Asn Arg Arg Tyr Lys Thr Lys Arg Lys Gln
 85 90 95
 Leu Ser Ser Glu Leu Gly Asp Leu Glu Lys His Ser Ser Leu Pro Ala
 100 105 110
 Leu Lys Glu Glu Ala Phe Ser Arg Ala Ser Leu Val Ser Val Tyr Asn
 115 120 125
 Ser Tyr Pro Tyr Tyr Pro Tyr Leu Tyr Cys Val Gly Ser Trp Ser Pro
 130 135 140
 Ala Phe Trp
 145

<210> 337
 <211> 9
 <212> PRT
 <213> Homo sapien

<400> 337
 Ala Leu Thr Gly Phe Thr Phe Ser Ala
 1 5

<210> 338
 <211> 9
 <212> PRT
 <213> Homo sapien

<400> 338
 Leu Leu Ala Asn Asp Leu Met Leu Ile
 1 5

<210> 339
 <211> 318
 <212> PRT
 <213> Homo sapien

<400> 339
 Met Val Glu Leu Met Phe Pro Leu Leu Leu Leu Leu Pro Phe Leu
 1 5 10 15
 Leu Tyr Met Ala Ala Pro Gln Ile Arg Lys Met Leu Ser Ser Gly Val
 20 25 30
 Cys Thr Ser Thr Val Gln Leu Pro Gly Lys Val Val Val Val Thr Gly
 35 40 45
 Ala Asn Thr Gly Ile Gly Lys Glu Thr Ala Lys Glu Leu Ala Gln Arg
 50 55 60
 Gly Ala Arg Val Tyr Leu Ala Cys Arg Asp Val Glu Lys Gly Glu Leu
 65 70 75 80
 Val Ala Lys Glu Ile Gln Thr Thr Thr Gly Asn Gln Gln Val Leu Val
 85 90 95
 Arg Lys Leu Asp Leu Ser Asp Thr Lys Ser Ile Arg Ala Phe Ala Lys
 100 105 110
 Gly Phe Leu Ala Glu Glu Lys His Leu His Val Leu Ile Asn Asn Ala
 115 120 125
 Gly Val Met Met Cys Pro Tyr Ser Lys Thr Ala Asp Gly Phe Glu Met
 130 135 140
 His Ile Gly Val Asn His Leu Gly His Phe Leu Leu Thr His Leu Leu

```

145          150          155          160
Leu Glu Lys Leu Lys Glu Ser Ala Pro Ser Arg Ile Val Asn Val Ser
          165          170          175
Ser Leu Ala His His Leu Gly Arg Ile His Phe His Asn Leu Gln Gly
          180          185          190
Glu Lys Phe Tyr Asn Ala Gly Leu Ala Tyr Cys His Ser Lys Leu Ala
          195          200          205
Asn Ile Leu Phe Thr Gln Glu Leu Ala Arg Arg Leu Lys Gly Ser Gly
          210          215          220
Val Thr Thr Tyr Ser Val His Pro Gly Thr Val Gln Ser Glu Leu Val
          225          230          235          240
Arg His Ser Ser Phe Met Arg Trp Met Trp Trp Leu Phe Ser Phe Phe
          245          250          255
Ile Lys Thr Pro Gln Gln Gly Ala Gln Thr Ser Leu His Cys Ala Leu
          260          265          270
Thr Glu Gly Leu Glu Ile Leu Ser Gly Asn His Phe Ser Asp Cys His
          275          280          285
Val Ala Trp Val Ser Ala Gln Ala Arg Asn Glu Thr Ile Ala Arg Arg
          290          295          300
Leu Trp Asp Val Ser Cys Asp Leu Leu Gly Leu Pro Ile Asp
305          310          315

```

<210> 340
 <211> 483
 <212> DNA
 <213> Homo sapien

```

<400> 340
gccgagggtct gccttcacac ggaggacacg agactgcttc ctcaagggtc cctgcctgcc      60
tggacactgg tgggaggcgc tgtttagttg gctgttttca gaggggtctt tcggagggac      120
ctcctgctgc aggctggagt gtctttattc ctggcgggag accgcacatt ccactgctga      180
ggttgtgggg gcggtttatc aggcagtgat aacataaga tgtcatttcc ttgactccgg      240
ccttcaattt tctctttggc tgacgacgga gtccgtggtg tcccgatgta actgaccctt      300
gctccaaacg tgacatcact gatgctcttc tggggggtgc tgatggcccg cttgggtcacg      360
tgctcaatct cgccattcga ctcttgctcc aaactgtatg aagacacctg actgcacggt      420
ttttctgggc ttccagaatt taaagtgaag ggcagcactc ctaagctccg actccgatgc      480
ctg                                                                                   483

```

<210> 341
 <211> 344
 <212> DNA
 <213> Homo sapien

```

<400> 341
ctgctgctga gtcacagatt tcattataaa tagcctccct aaggaaaata cactgaatgc      60
tatttttact aaccattcta tttttataga aatagctgag agtttctaaa ccaactctct      120
gctgccttac aagtattaaa tattttactt ctttccataa agagtagctc aaaatatgca      180
attaatttaa taatttctga tgatggtttt atctgcagta atatgtatat catctattag      240
aatttactta atgaaaaaact gaagagaaca aaatttgtaa ccactagcac ttaagtactc      300
ctgattctta acattgtctt taatgaccac aagacaacca acag                                     344

```

<210> 342
 <211> 592
 <212> DNA
 <213> Homo sapien

<400> 342

acagcaaaaa	agaaactgag	aagcccaaty	tgctttcttg	ttaacatcca	cttatccaac	60
caatgtggaa	acttcttata	cttggttcca	ttatgaagtt	ggacaattgc	tgctatcaca	120
cctggcaggt	aaaccaatgc	caagagagtg	atggaaacca	ttggcaagac	tttgttgatg	180
accaggattg	gaattttata	aaaatattgt	tgatgggaag	ttgctaaagg	gtgaattact	240
tccctcagaa	gagtgtaaag	aaaagtcaga	gatgctataa	tagcagctat	tttaattggc	300
aagtgccact	gtggaaagag	ttcctgtgtg	tgctgaagtt	ctgaagggca	gtcaaattca	360
tcagcatggg	ctgtttggtg	caaatgcaaa	agcacaggtc	tttttagcat	gctgggtctct	420
cccgtgtcct	tatgcaaata	atcgtcttct	tctaaatttc	tcttaggctt	cattttccaa	480
agttcttctt	ggtttgat	gtcttttctg	ctttccatta	attctataaa	atagtatggc	540
ttcagccacc	cactcttcgc	cttagcttga	ccgtgagctc	cggctgccgc	tg	592

<210> 343

<211> 382

<212> DNA

<213> Homo sapien

<400> 343

ttcttgacct	cttcctcctt	caagctcaaa	caccacctcc	cttattcagg	accggcactt	60
cttaatgttt	gtggctttct	ctccagcctc	tcttaggagg	ggtaatgggt	gagttggcat	120
cttgtaactc	tcctttctcc	tttcttcccc	tttctctgcc	cgctttcccc	atcctgctgt	180
agacttcttg	attgtcagtc	tgtgtcacat	ccagtgattg	ctttggtttc	tgttcccttt	240
ctgactgccc	aaggggctca	gaaccccagc	aatcccttcc	tttactacc	ttcttttttg	300
ggggtagttg	gaagggactg	aaattgtggg	gggaaggtag	gaggcacatc	aataaagagg	360
aaaccaccaa	gctgaaaaaa	aa				382

<210> 344

<211> 536

<212> DNA

<213> Homo sapien

<400> 344

ctgggcctga	agctgtaggg	taaatcagag	gcaggcttct	gagtgatgag	agtcctgaga	60
caataggcca	cataaacttg	gctggatgga	acctcacaat	aagggtggca	cctcttgttt	120
gttttagggg	atgccaagga	taaggccagc	tcagttatat	gaagagaagc	agaacaaaca	180
agtctttcag	agaaatggat	gcaatcagag	tgggatcccc	gtcacatcaa	ggtcacactc	240
caccttcattg	tgcctgaatg	gttgccaggt	cagaaaaatc	caccccttac	gagtgcggct	300
tcgaccctat	atcccccgcc	cgctccctt	tctccataaa	attcttctta	gtagctatta	360
ccttcttatt	atttgatcta	gaaattgccc	tccttttacc	cctaccatga	gccctacaaa	420
caactaacct	gccactaata	gttatgtcat	ccctcttatt	aatcatcatc	ctagccctaa	480
gtctggccta	tgagtgacta	caaaaaggat	tagactgagc	cgaataacaa	aaaaaa	536

<210> 345

<211> 251

<212> DNA

<213> Homo sapien

<400> 345

accttttgag	gtctctctca	ccacctccac	agccaccgtc	accgtgggat	gtgctggatg	60
tgaatgaagc	ccccatcttt	gtgcctcctg	aaaagagagt	ggaagtgtcc	gaggactttg	120
gcgtgggcca	ggaaatcaca	tctacactg	cccaggagcc	agacacattt	atggaacaga	180
aaataacata	tcggatttgg	agagacactg	ccaactggct	ggagattaat	ccggacactg	240
gtgccatttc	c					251

<210> 346
 <211> 282
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(282)
 <223> n = A,T,C or G

<400> 346
 cgcgtctctg acactgtgat catgacaggg gttcaaacag aaagtgcctg ggccctcctt 60
 ctaagtcttg ttaccaaaaa aaggaaaaag aaaagatctt ctcagttaca aattctggga 120
 agggagacta tacctggctc ttgccctaag tgagaggtct tccctcccgc accaaaaaat 180
 agaaaggctt tctatttcac tggcccaggt agggggaagg agagtaactt tgagtctgtg 240
 ggtctcattt cccaagggtgc cttcaatgct catnaaaacc aa 282

<210> 347
 <211> 201
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(201)
 <223> n = A,T,C or G

<400> 347
 acacacataa tattataaaa tgccatctaa ttggaaggag ctttctatca ttgcaagtca 60
 taaatataac ttttaaaaana ntactancag cttttaccta ngctcctaaa tgcttgtaaa 120
 tctgagactg actggaccca cccagaccca gggcaaagat acatgttacc atatcatctt 180
 tataaagaat ttttttttgt c 201

<210> 348
 <211> 251
 <212> DNA
 <213> Homo sapien

<400> 348
 ctgttaatca caacatttgt gcatacttg tgccaagtga gaaaatgttc taaaatcaca 60
 agagagaaca gtgccagaat gaaactgacc ctaagtccca ggtgcccctg ggcaggcaga 120
 aggagacact ccagcatgg aggaggggtt atcttttcat cctaggtcag gtctacaatg 180
 ggggaagggtt ttattataga actcccaaca gccacctca ctctgcccac ccacccgatg 240
 gccctgccc c 251

<210> 349
 <211> 251
 <212> DNA
 <213> Homo sapien

<400> 349
 taaaaatcaa gccatttaat tgtatctttg aaggtaaaca atatatggga gctggatcac 60
 aacccttgag gatgccagag ctatgggtcc agaacatggg gtggtattat caacagagtt 120
 cagaagggtc tgaactctac gtgttaccag agaacataat gcaattcatg cattccactt 180
 agcaattttg taaaataacca gaaacagacc ccaagagtct ttcaagatga ggaaaattca 240

actcctgggtt t

251

<210> 350

<211> 908

<212> DNA

<213> Homo sapien

<400> 350

ctggacactt	tgcgagggct	tttgcctggct	gctgctgctg	cccgtcatgc	tactcatcgt	60
agcccgcccg	gtgaagctcg	ctgctttccc	tacctcctta	agtgactgcc	aaacgcccac	120
cggctggaat	tgctctgggt	atgatgacag	agaaaatgat	ctcttcctct	gtgacaccaa	180
cacctgtaaa	tttgcctggg	aatgtttaag	aattggagac	actgtgactt	gcgtctgtca	240
gttcaagtgc	aacaatgact	atgtgcctgt	gtgtggctcc	aatggggaga	gctaccagaa	300
tgagtgttac	ctgcgacagg	ctgcatgcaa	acagcagagt	gagatacttg	tggtgtcaga	360
aggatcatgt	gccacagtcc	atgaaggctc	tggagaaact	agtcaaaagg	agacatccac	420
ctgtgatatt	tgccagtttg	gtgcagaatg	tgacgaagat	gccgaggatg	tctgggtgtg	480
gtgtaatat	gactgttctc	aaaccaactt	caatccccct	tgcgcttctg	atgggaaatc	540
ttatgataat	gcatgccaaa	tcaaagaagc	atcgtgtcag	aaacaggaga	aaattgaagt	600
catgtctttg	ggtcgatgtc	aagataacac	aactacaact	actaagtctg	aagatgggca	660
ttatgcaaga	acagattatg	cagagaatgc	taacaaatta	gaagaaagtg	ccagagaaca	720
ccacatacct	tgtccggaac	attacaatgg	cttctgcatg	catgggaagt	gtgagcattc	780
tatcaatatg	caggagccat	cttgacaggtg	tgatgctggg	tatactggac	aacactgtga	840
aaaaaaggac	tacagtgttc	tatacgttgt	tcccggctct	gtacgatttc	agtatgtctt	900
aatcgag						908

<210> 351

<211> 472

<212> DNA

<213> Homo sapien

<400> 351

ccagttat	gcaagtggta	agagcctatt	taccataaat	aataactaaga	accaactcaa	60
gtcaaactt	aatgccattg	ttattgtgaa	ttaggattaa	gtagtaattt	tcaaaattca	120
cattaacttg	attttaaaat	cagwtttgyg	agtcatttac	cacaagctaa	atgtgtacac	180
tatgataaaa	acaaccattg	tattcctggt	tttctaaaca	gtcctaattt	ctaactactgt	240
atatatcctt	cgacatcaat	gaactttgtt	ttcttttact	ccagtaataa	agtaggcaca	300
gatctgtcca	caacaaactt	gccctctcat	gccttgccct	tcaccatgct	ctgctccagg	360
tcagccccct	tttggcctgt	ttgttttgtc	aaaaaccta	tctgcttctt	gcttttcttg	420
gtaatatata	tttagggaag	atgttgcttt	gcccacacac	gaagcaaagt	aa	472

<210> 352

<211> 251

<212> DNA

<213> Homo sapien

<400> 352

ctcaaagcta	atctctcggg	aatcaaacca	gaaaagggca	aggatcttag	gcatgggtgga	60
tgtggataag	gccagggtcaa	tggctgcaag	catgcagaga	aagaggtaca	tcggagcgtg	120
caggctgcgt	tccgtcctta	cgatgaagac	cacgatgcag	tttccaaaca	ttgccactac	180
atacatggaa	aggagggggga	agccaaccca	gaaatgggct	ttctctaata	ctgggataacc	240
aataagcaca	a					251

<210> 353

<211> 436

<212> DNA

<213> Homo sapien

<400> 353

tttttttttt	tttttttttt	ttttttacaa	caatgcagtc	atatttttat	tgagtatgtg	60
cacattatgg	tattattact	atactgatta	tatttatcat	gtgacttcta	attaraaaat	120
gtatccaaaa	gcaaaacagc	agatatataa	aattaaagag	acagaagata	gacattaaca	180
gataaggcaa	cttatacatt	gacaatccaa	atccaatata	tttaaactt	tgggaaatga	240
gggggacaaa	tggaagccar	atcaaatttg	tgtaaaacta	ttcagtatgt	ttcccttgct	300
tcatgtctga	raaggctctc	ccttcaatgg	ggatgacaaa	ctccaaatgc	cacacaaatg	360
ttaacagaat	actagattca	cactggaacg	ggggtaaaga	agaaattatt	ttctataaaa	420
gggctcctaa	tgtagt					436

<210> 354

<211> 854

<212> DNA

<213> Homo sapien

<400> 354

ccttttctag	ttcaccagtt	ttctgcaagg	atgctgggta	gggagtgtct	gcaggaggag	60
caagtctgaa	accaaactta	ggaaacatag	gaaacgagcc	aggcacaggg	ctgggtgggccc	120
atcagggacc	accctttggg	ttgatatttt	gcttaatctg	catcttttga	gtaagatcat	180
ctggcagtag	aagctgttct	ccaggtacat	ttctctagct	catgtacaaa	aacatcctga	240
aggactttgt	caggtgcctt	gctaaaagcc	agatgcgttc	ggcacttccct	tgggtctgagg	300
ttaattgcac	acctacaggc	actgggctca	tgctttcaag	tattttgtcc	tcactttagg	360
gtgagtga	gatccccatt	ataggagcac	ttgggagaga	tcataataaaa	gctgactcct	420
gagtacatgc	agtaatgggg	tagatgtgtg	tgggtgtgtct	tcattccctgc	aaggggtgctt	480
gttagggagt	gtttccagga	ggaacaagtc	tgaaaccaat	catgaaataa	atggtaggtg	540
tgaactggaa	aactaattca	aaagagagat	cgtgatatca	gtgtgggtga	tacaccttgg	600
caatatggaa	ggctctaatt	tgcccatatt	tgaaataata	attcagcttt	ttgtaataca	660
aaataacaaa	ggattgagaa	tcattggtgtc	taatgtataa	aagaccaggg	aaacataaat	720
atatcaactg	cataaatgta	aaatgcatgt	gacccaagaa	ggccccaag	tggcagacaa	780
cattgtaccc	attttccctt	ccaaaatgtg	agcggcgggc	ctgctgcttt	caaggctgtc	840
acacgggatg	tcag					854

<210> 355

<211> 676

<212> DNA

<213> Homo sapien

<400> 355

gaaattaagt	atgagctaaa	ttccctgtta	aaacctctag	gggtgacaga	tctcttcaac	60
caggtcaaaag	ctgatctttc	tggaatgtca	ccaaccaagg	gcctatattt	atcaaaaagcc	120
atccacaagt	catacctgga	tgtcagcgaa	gagggcacgg	aggcagcagc	agccactggg	180
gacagcatcg	ctgtaaaaag	cctaccaatg	agagctcagt	tcaaggcgaa	ccaccccttc	240
ctgtttctta	taaggcacac	tcataccaac	acgatccctat	tctgtggcaa	gcttgccctct	300
ccctaatacag	atgggggtga	gtaagggtca	gagttgcaga	tgaggtgcag	agacaatcct	360
gtgactttcc	cacggccaaa	aagctgttca	cacctcacgc	acctctgtgc	ctcagtttgc	420
tcattctgaa	aataggtcta	ggatttcttc	caaccatttc	atgagttgtg	aagctaaggc	480
tttggttaatc	atggaaaaag	gtagacttat	gcagaaaagcc	tttctggctt	tcttatctgt	540
ggtgtctcat	ttgagtgtctg	tccagtgcac	tgatcaagtc	aatgagttaa	attttaaggg	600
attagatttt	cttgacttgt	atgtatctgt	gagatcttga	ataagtgacc	tgacatctct	660
gcttaaagaa	aaccag					676

<210> 356

<211> 574

<212> DNA

<213> Homo sapien

<400> 356

tttttttttt	tttttcagga	aaacattctc	ttactttatt	tgcattctcag	caaaggttct	60
catgtggcac	ctgactggca	tcaaaccaaa	gttcgtaggc	caacaaagat	gggccactca	120
caagcttccc	atttgtagat	ctcagtgcc	atgagtatct	gacacctgtt	cctctcttca	180
gtctcttagg	gaggcttaaa	tctgtctcag	gtgtgctaag	agtgccagcc	caaggkggtc	240
aaaagtccac	aaaactgcag	tctttgctgg	gatagtaagc	caagcagtgc	ctggacagca	300
gagttctttt	cttgggcaac	agataaccag	acaggactct	aatcgtgctc	ttattcaaca	360
ttcttctgtc	tctgcctaga	ctggaataaa	aagccaatct	ctctcgtggc	acaggggaagg	420
agatacaagc	tcgtttacat	gtgatagatc	taacaaaggc	atctaccgaa	gtctggtctg	480
gatagacggc	acagggagct	cttaggtcag	cgctgctggt	tggaggacat	tcctgagtcc	540
agctttgcag	cctttgtgca	acagtacttt	ccca			574

<210> 357

<211> 393

<212> DNA

<213> Homo sapien

<400> 357

tttttttttt	tttttttttt	tttttttttt	tacagaatat	aratgcttta	tcactgkact	60
taatatggkg	kcttggtcac	tatacttaaa	aatgcaccac	tcataaatat	ttaattcagc	120
aagccacaac	caaracttga	ttttatcaac	aaaaaccctt	aaatataaac	ggsaaaaaag	180
atagatatata	ttattccagt	ttttttaaaa	cttaaaarat	attccattgc	cgaattaara	240
araarataag	tggttatatg	aaagaagggc	attcaagcac	actaaaraaa	cctgaggkaa	300
gcataatctg	tacaaaatta	aactgtcctt	tttggcattt	taacaaattt	gcaacgktct	360
tttttttctt	tttctgtttt	tttttttttt	tac			393

<210> 358

<211> 630

<212> DNA

<213> Homo sapien

<400> 358

acagggtaaa	caggaggatc	cttgcctctca	cggagcttac	attctagcag	gaggacaata	60
ttaatgttta	taggaaaatg	atgagtttat	gacaaaggaa	gtagatagtg	ttttacaaga	120
gcatagagta	gggaagctaa	tccagcacag	ggaggtcaca	gagacatccc	taaggaagtg	180
gagtttaaac	tgagagaagc	aagtgcctaa	actgaaggat	gtgttgaaga	agaagggaga	240
gtagaacaat	ttgggcagag	ggaaccttat	agaccctaag	gtgggaaggt	tcaaagaact	300
gaaagagagc	tagaacagct	ggagccgttc	tccggtgtaa	agaggagtca	aagagataag	360
attaaagatg	tgaagattaa	gatcttggtg	gcattcaggg	attggcactt	ctacaagaaa	420
tcactgaagg	gagtaatgtg	acattacttt	tcatttcagg	atggccattc	taactccagg	480
gggtagactg	gactaggtaa	gactggaggc	aggtagacct	cttctaaggc	ctgcatagtg	540
gaaagacaaa	aataagtggg	gaaattcagg	ggatagttaa	aatcagtagg	acttaatgag	600
caagccagag	gttcctccac	aacaaccagt				630

<210> 359

<211> 620

<212> DNA

<213> Homo sapien

<400> 359

acagcattcc	aaaatataca	tctagagact	aarrgtaaat	gctctatagt	gaagaagtaa	60
taattaaaaa	atgctactaa	tatagaaaat	ttataatcag	aaaaataaat	attcagggag	120

ctcaccagaa	gaataaagtg	ctctgccagt	tattaaagga	ttactgctgg	tgaattaaat	180
atggcattcc	ccaagggaaa	tagagagatt	cttctggatt	atgttcaata	tttatttcac	240
aggattaact	gttttaggaa	cagatataaa	gcttcgccac	ggaagagatg	gacaaagcac	300
aaagacaaca	tgatacctta	ggaagcaaca	ctaccctttc	aggcataaaa	tttggagaaa	360
tgcaacatta	tgcttcatga	ataatatgta	gaaagaaggt	ctgatgaaaa	tgacatcctt	420
aatgtaagat	aactttataa	gaattctggg	tcaaataaaa	ttctttgaag	aaaacatcca	480
aatgtcattg	acttatcaaa	tactatcttg	gcatataacc	tatgaaggca	aaactaaaca	540
aacaaaaagc	tcacaccaa	caaaaccatc	aacttatttt	gtattctata	acatacgaga	600
ctgtaaagat	gtgacagtgt					620

<210> 360

<211> 431

<212> DNA

<213> Homo sapien

<400> 360

aaaaaaaaaa	agccagaaca	acatgtgata	gataatatga	ttggctgcac	acttccagac	60
tgatgaatga	tgaacgtgat	ggactattgt	atggagcaca	tcttcagcaa	gagggggaaa	120
tactcatcat	ttttggccag	cagttgtttg	atcaccaaac	atcatgccag	aatactcagc	180
aaaccttctt	agctcttgag	aagtcaaagt	ccgggggaat	ttattcctgg	caattttaat	240
tggactcctt	atgtgagagc	agcggctacc	cagctggggg	ggtggagcga	acccgtcact	300
agtggacatg	cagtggcaga	gtccttggtg	accacctaga	ggaatacaca	ggcacatgtg	360
tgatgccaa	gtagacacct	gtagcactca	aatttgtctt	gtttttgtct	ttcgggtgtg	420
agattcttag	t					431

<210> 361

<211> 351

<212> DNA

<213> Homo sapien

<400> 361

acactgat	tttccgat	caaaaa	gaatcatcat	ctttaccttg	acttttcagg	gaattactga	60
actttctt	cttccaga	agatat	ggcacagcca	ttgccttggc	ctcacttgaa	gggtctgcat	120
ttgggtct	cttcttgg	ttctcttg	ccaagtctcc	cagccactcg	agggagaaat	atcgggaggt	180
ttgacttc	cttccggg	gcttttcc	cccaggggct	tcaccgtgag	ccctgcggcc	ctcagggctg	240
caatcctg	gaattca	atgtct	gaaacctcgc	tctctgcctg	ctggacttct	gaggccgtca	300
ctgccact	cttctcc	agcgtc	tctgacagct	cctcatctgt	ggctctgttg	t	351

<210> 362

<211> 463

<212> DNA

<213> Homo sapien

<400> 362

acttcatcag	gccataatgg	gtgcctcccg	tgagaatcca	agcacctttg	gactgcgcga	60
tgtagatgag	ccggctgaag	atcttgcgca	tgcgcggctt	cagggcgaag	ttcttggcgc	120
ccccggtcac	agaaatgacc	aggttgggtg	ttttcagggtg	ccagtgtctg	gtcagcagct	180
cgtaaaggat	ttccgcgtcc	gtgtcgcagg	acagacgtat	atacttccct	ttcttcccca	240
gtgtctcaaa	ctgaatatcc	ccaaaggcgt	cggtaggaaa	ttccttgggtg	tgtttcttgt	300
agttccattt	ctcacttttg	ttgatctggg	tgccttccat	gtgctggctc	tgggcatagc	360
cacacttgca	cacattctcc	ctgataagca	cgatgggtgtg	gacaggaagg	aaggatttca	420
ttgagcctgc	ttatggaaac	tggtattgtt	agcttaata	gac		463

<210> 363

<211> 653

<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> (1)...(653)
<223> n = A,T,C or G

<400> 363

acccccgagt	ncctgnctgg	catactgnga	acgaccaacg	acacacccaa	gctcggcctc	60
ctcttgngga	ttctgggtga	catcttcatg	aatggcaacc	gtgccagwga	ggctgtcctc	120
tgggaggcac	tacgcaagat	gggactgcgt	cctgggggtga	gacatcctct	ccttgggagat	180
ctaacgaaac	ttctcaccta	tgagttgtaa	agcagaaata	cctgnactac	agacgagtgc	240
ccaacagcaa	ccccccggaa	gtatgagttc	ctctrggggc	tccgttccta	ccatgagasc	300
tagcaagatg	naagtgttga	gantcattgc	agaggttcag	aaaagagacc	cntcgtgact	360
ggtctgcaca	gttcatggag	gctgcagatg	aggccttgga	tgctctggat	gctgctgcag	420
ctgaggccga	agccccgggt	gaagcaagaa	cccgcattgg	aattggagat	gaggctgtgt	480
ntggggccctg	gagctgggat	gacattgagt	ttgagctgct	gacctgggat	gaggaaggag	540
attttgagga	tcctntggtcc	agaattccat	ttaccttctg	ggccagatac	caccagaatg	600
cccgtctcag	attccctcag	acctttgccg	gtcccattat	tggtcstggt	ggt	653

<210> 364
<211> 401
<212> DNA
<213> Homo sapien

<400> 364

actagaggaa	agacgttaaa	ccactctact	accacttgtg	gaactctcaa	agggtaaattg	60
acaaagccaa	tgaatgactc	taaaaacaat	atttacattt	aatggtttgt	agacaataaaa	120
aaaacaaggt	ggatagatct	agaattgtaa	catttttaaga	aaacctatagc	atttgacaga	180
tgagaaaagct	caattataga	tgcaaagtta	taactaaact	actatagtag	taaagaaata	240
catttcacac	ccttcatata	aattcactat	cttggtttga	ggcactccat	aaaatgtatc	300
acgtgcatag	taaatcttta	tatttgctat	ggcgttgcac	tagaggactt	ggactgcaac	360
aagtggatgc	gcggaaaatg	aaatcttctt	caatagccca	g		401

<210> 365
<211> 356
<212> DNA
<213> Homo sapien

<400> 365

ccagtgtcat	atgtgggctt	aaaatttcaa	gaagggcact	tcaaattggct	ttgcatttgc	60
atgtttcagt	gctagagcgt	aggaatagac	cctggcgctc	actgtgagat	gttcttcagc	120
taccagagca	tcaagtctct	gcagcaggtc	attcttgggt	aaagaaatga	cttccacaaa	180
ctctccatcc	cctggctttg	gcttcggcct	tgcgttttcg	gcatcatctc	cgttaatggt	240
gactgtcacg	atgtgtatag	tacagtttga	caagcctggg	tccatacaga	ccgctggaga	300
acattcggca	atgtcccctt	tgtagccagt	ttcttcttcg	agctcccgga	gagcag	356

<210> 366
<211> 1851
<212> DNA
<213> Homo sapien

<400> 366

tcacaccat	tgccagcagc	ggcaccgtta	gtcagggttt	ctgggaatcc	cacatgagta	60
-----------	------------	------------	------------	------------	------------	----

cttccgtggt	cttcattctt	cttcaatagc	cataaatctt	ctagctctgg	ctggctgttt	120
tcacttcctt	taagcctttg	tgactcttcc	tctgatgtca	gctttaagtc	ttgttctgga	180
ttgctgtttt	cagaagagat	ttttaacatc	tggttttctt	tgtagtcaga	aagtaactgg	240
caaattacat	gatgatgact	agaaacagca	tactctctgg	ccgtctttcc	agatcttgag	300
aagatacatc	aacatttttg	tcaagtagag	ggctgactat	acttgctgat	ccacaacata	360
cagcaagtat	gagagcagtt	cttccatata	tatccagcgc	atttaaattc	gcttttttct	420
tgattaaaaa	tttcaccact	tgctgttttt	gctcatgtat	accaagtagc	agtgggtgtga	480
ggccatgctt	gttttttgat	tcgatatacag	caccgtataa	gagcagtgct	ttggccatta	540
atttatcttc	attgtagaca	gcatagtgta	gagtgggtatt	tccataactca	tctggaatat	600
ttggatcagt	gccatgttcc	agcaacatta	acgcacattc	atcttcctgg	cattgtacgg	660
cctttgtcag	agctgtcctc	tttttgttgt	caaggacatt	aagttagacat	cgtctgtcca	720
gcacgagttt	tactacttct	gaattcccat	tggcagaggg	cagatgtaga	gcagtcctct	780
tttgcttgct	cctcttgctt	acatccgtgt	ccctgagcat	gacgatgaga	tcctttctgg	840
ggactttacc	ccaccaggca	gctctgtgga	gcttgtccag	atcttctcca	tggacgtggt	900
acctgggata	catgaaggcg	ctgtcatcgt	agtctcccca	agcgaccacg	ttgctcttgc	960
cgctccccctg	cagcagggga	agcagtggca	gcaccacttg	cacctcttgc	tcccaagcgt	1020
cttcacagag	gagtcgttgt	ggtctccaga	agtgccacg	ttgctcttgc	cgctccccct	1080
gtccatccag	ggaggaagaa	atgcaggaaa	tgaagatgc	atgcacgatg	gtatactcct	1140
cagccatcaa	acttctggac	agcaggtcac	ttccagcaag	gtggagaaaag	ctgtccaccc	1200
acagaggatg	agatccagaa	accacaatat	ccattcacaa	acaaacactt	ttcagccaga	1260
cacaggtact	gaaatcatgt	catctgcggc	aacatgggtg	aacctaccca	atcacacatc	1320
aagagatgaa	gacactgcag	tatatctgca	caacgtaata	ctcttcatcc	ataacaaaat	1380
aatataattt	tcctctggag	ccatatggat	gaactatgaa	ggaagaactc	cccgaagaag	1440
ccagtcgcag	agaagccaca	ctgaagctct	gtcctcagcc	atcagcgcca	cggacaggat	1500
tgtgtttctt	ccccagtgt	gcagcctcaa	gttatcccga	agctgcccga	gcacacgggtg	1560
gctcctgaga	aacaccccag	ctcttccggg	ctaacacagg	caagtcaata	aatgtgataa	1620
tcacataaac	agaattaaaa	gcaaagtcac	ataagcatct	caacagacac	agaaaaggca	1680
tttgacaaaa	tccagcatcc	ttgtatttat	tggtgcagtt	ctcagaggaa	atgcttctaa	1740
cttttcccca	tttagtatta	tggtggctgt	gggcttgtca	taggtggttt	ttattacttt	1800
aagggtatgtc	ccttctatgc	ctgttttgc	gaggggttta	attctcgtgc	c	1851

<210> 367

<211> 668

<212> DNA

<213> Homo sapien

<400> 367

cttgagcttc	caaataygga	agactggccc	ttacacasgt	caatgttaaa	atgaatgcat	60
ttcagtattt	tgaagataaa	atttgtatag	ctataccttg	ttttttgatt	cgatatcagc	120
accrtataag	agcagtgtt	tggccattaa	tttatctttc	attttagaca	gctagtgya	180
gagtgggtatt	tccataactca	tctggaatat	ttggatcagt	gccatgttcc	agcaacatta	240
acgcacattc	atcttctctg	cattgtacgg	cctgtcagta	ttagacccaa	aaacaaatta	300
catatcttag	gaattcaaaa	taacattcca	cagctttcac	caactagtta	tatttaaagg	360
agaaaactca	tttttatgcc	atgtattgaa	atcaaaccac	cctcatgctg	atatagttgg	420
ctactgcata	cctttatcag	agctgtcctc	tttttgttgt	caaggacatt	aagttgacat	480
cgtctgtcca	gcaggagttt	tactacttct	gaattcccat	tggcagaggc	cagatgtaga	540
gcagtcctat	gagagtgaga	agacttttta	ggaaattgta	gtgcactagc	tacagccata	600
gcaatgattc	atgtaactgc	aaacactgaa	tagcctgcta	ttactctgcc	ttcaaaaaaa	660
aaaaaaaa						668

<210> 368

<211> 1512

<212> DNA

<213> Homo sapien

<400> 368

gggtcgccca	ggggsgcgt	gggctttcct	cgggtgggtg	tgggttttcc	ctgggtgggg	60
tgggctgggc	trgaatcccc	tgctgggggt	ggcaggtttt	ggctgggatt	gacttttytc	120
ttcaaacaga	ttggaaaccc	ggagttacct	gctagttagt	gaaactgggt	ggtagacgcg	180
atctgttggc	tactactggc	ttctcctggc	tgttaaaagc	agatgggtgg	tgaggttgat	240
tccatgccgg	ctgcttcttc	tgtgaagaag	ccatttggtc	tcaggagcaa	gatgggcaag	300
tggtgctgcc	gttgcttccc	ctgctgcagg	gagagcggca	agagcaacgt	gggcacttct	360
ggagaccacg	acgactctgc	tatgaagaca	ctcaggagca	agatgggcaa	gtggtgccgc	420
cactgcttcc	cctgctgcag	ggggagtggc	aagagcaacg	tgggcgcttc	tggagaccac	480
gacgaytctg	ctatgaagac	actcaggaac	aagatgggca	agtgggtgctg	ccactgcttc	540
ccctgctgca	gggggagcrg	caagagcaag	gtgggcgctt	ggggagacta	cgatgacagt	600
gccttcatgg	agcccaggta	ccacgtccgt	ggagaagatc	tggacaagct	ccacagagct	660
gcctggtggg	gtaaagtccc	cagaaaggat	ctcatcgtca	tgctcaggga	cactgacgtg	720
aacaagaagg	acaagcaaaa	gaggactgct	ctacatctgg	cctctgccaa	tgggaattca	780
gaagtagtaa	aactcstgct	ggacagacga	tgtcaactta	atgtccttga	caacaaaaag	840
aggacagctc	tgayaaaggc	cgtacaatgc	caggaagatg	aatgtgcgtt	aatgttgctg	900
gaacatggca	ctgatccaaa	tattccagat	gagtatggaa	ataccactct	rcactaygct	960
rtctayaatg	aagataaatt	aatggccaaa	gcactgctct	tatayggtgc	tgatatcgaa	1020
tcaaaaaaca	aggtatagat	ctactaattt	tactttcaaa	atactgaaat	gcattcattt	1080
taacattgac	gtgtgtaagg	gccagtcttc	cgtatttgga	agctcaagca	taacttgaat	1140
gaaaatattt	tgaaatgacc	taattatctm	agactttatt	ttaaatattg	ttattttcaa	1200
agaagcatta	gagggtagag	tttttttttt	ttaaatgcac	ttctggtaaa	tacttttctt	1260
gaaaacactg	aatttgtaaa	aggtaatact	tactattttt	caatttttcc	ctcctaggat	1320
ttttttcccc	taatgaatgt	aagatggcaa	aatttgccct	gaaatagggt	ttacatgaaa	1380
actccaagaa	aagttaaaca	tgtttcagtg	aatagagatc	ctgctccttt	ggcaagttcc	1440
taaaaaacag	taatagatac	gaggtgatgc	gcctgtcagt	ggcaagggtt	aagatatattc	1500
tgatctcgtg	cc					1512

<210> 369

<211> 1853

<212> DNA

<213> Homo sapien

<400> 369

gggtcgccca	ggggsgcgt	gggctttcct	cgggtgggtg	tgggttttcc	ctgggtgggg	60
tgggctgggc	trgaatcccc	tgctgggggt	ggcaggtttt	ggctgggatt	gacttttytc	120
ttcaaacaga	ttggaaaccc	ggagttacct	gctagttagt	gaaactgggt	ggtagacgcg	180
atctgttggc	tactactggc	ttctcctggc	tgttaaaagc	agatgggtgg	tgaggttgat	240
tccatgccgg	ctgcttcttc	tgtgaagaag	ccatttggtc	tcaggagcaa	gatgggcaag	300
tggtgctgcc	gttgcttccc	ctgctgcagg	gagagcggca	agagcaacgt	gggcacttct	360
ggagaccacg	acgactctgc	tatgaagaca	ctcaggagca	agatgggcaa	gtggtgccgc	420
cactgcttcc	cctgctgcag	ggggagtggc	aagagcaacg	tgggcgcttc	tggagaccac	480
gacgaytctg	ctatgaagac	actcaggaac	aagatgggca	agtgggtgctg	ccactgcttc	540
ccctgctgca	gggggagcrg	caagagcaag	gtgggcgctt	ggggagacta	cgatgacagy	600
gccttcatgg	akcccaggta	ccacgtccrt	ggagaagatc	tggacaagct	ccacagagct	660
gcctggtggg	gtaaagtccc	cagaaaggat	ctcatcgtca	tgctcaggga	cackgaygtg	720
aacaagargg	acaagcaaaa	gaggactgct	ctacatctgg	cctctgccaa	tgggaattca	780
gaagtagtaa	aactcstgct	ggacagacga	tgtcaactta	atgtccttga	caacaaaaag	840
aggacagctc	tgayaaaggc	cgtacaatgc	caggaagatg	aatgtgcgtt	aatgttgctg	900
gaacatggca	ctgatccaaa	tattccagat	gagtatggaa	ataccactct	rcactaygct	960
rtctayaatg	aagataaatt	aatggccaaa	gcactgctct	tatayggtgc	tgatatcgaa	1020
tcaaaaaaca	agcatggcct	cacaccactg	ytacttggtt	tacatgagca	aaaacagcaa	1080
gtsgtgaaat	ttttaatyaa	gaaaaaagcg	aattttaaaat	gcrctggata	gatatggaag	1140
ractgctctc	atacttgctg	tatgttggtg	atcagcaagt	atagtcagcc	ytctacttga	1200
gcaaaatrct	gatgtatctt	ctcaagatct	ggaaagacgg	ccagagagta	tgctgtttct	1260

agtcattcatc	atgtaatttg	ccagttactt	tctgactaca	aagaaaaaca	gatgttaaaa	1320
atctcttctg	aaaacagcaa	tccagaacaa	gacttaaagc	tgacatcaga	ggaagagtca	1380
caaaggctta	aaggaagtga	aaacagccag	ccagaggcat	ggaaactttt	aaattttaaac	1440
ttttggttta	atgttttttt	tttttgctt	aataatatta	gatagtccca	aatgaaatwa	1500
cctatgagac	taggctttga	gaatcaatag	attctttttt	taagaatctt	ttggctagga	1560
gcggtgtctc	acgcctgtaa	ttccagcacc	ttgagaggct	gaggtgggca	gatcacgaga	1620
tcaggagatc	gagaccatcc	tggttaacac	ggtgaaaccc	catctctact	aaaaatacaa	1680
aaacttagct	gggtgtgggtg	gcgggtgcct	gtagtccag	ctactcagga	rgctgaggca	1740
ggagaatggc	atgaacccgg	gaggtggagg	ttgcagttag	ccgagatccg	ccactacact	1800
ccagcctggg	tgacagagca	agactctgtc	tcaaaaaaaa	aaaaaaaaaa	aaa	1853

<210> 370

<211> 2184

<212> DNA

<213> Homo sapien

<400> 370

ggcacgagaa	ttaaaaccct	cagcaaaaaca	ggcatagaag	ggacatacct	ttaaagtaata	60
aaaaccacct	atgacaagcc	cacagccaac	ataatactaa	atggggaaaaa	gttagaagca	120
tttctcttga	gaactgcaac	aataaatata	aggatgctgg	attttgtcaa	atgccttttc	180
tgtgtctgtt	gagatgctta	tgtgactttg	cttttaattc	tgtttatgtg	attatcacat	240
ttattgactt	gcctgtgtta	gaccggaaga	gctggggtgt	ttctcaggag	ccaccgtgtg	300
ctgcggcagc	ttcgggataa	cttgaggctg	catcactggg	gaagaaacac	aytcctgtcc	360
gtggcgctga	tggctgagga	cagagcttca	gtgtggcttc	tctgugactg	gcttcttcgg	420
ggagttcttc	cttcatagtt	catccatagt	gctccagagg	aaaattatat	tattttgtta	480
tggatgaaga	gtattacgtt	gtgcagatat	actgcagtgt	cttcatctct	tgatgtgtga	540
ttgggttaggt	tccaccatgt	tgccgcagat	gacatgattt	cagtacctgt	gtctggctga	600
aaagtgtttg	tttgtgaatg	gatattgtgg	tttctggatc	tcatectctg	tgggtggaca	660
gctttctcca	ccttgctgga	agtgacctgc	tgtccagaag	tttgatggct	gaggagtata	720
ccatcgtgca	tgcatctttc	atttctctga	tttcttcttc	cctggatgga	cagggggagc	780
ggcaagagca	acgtgggcac	ttctggagac	cacaacgact	cctctgtgaa	gacgcttggg	840
agcaagaggt	gcaagtgggtg	ctgccactgc	ttcccctgct	gcagggggagc	ggcaagagca	900
acgtggctgc	ttggggagac	tacgatgaca	gcgccttcat	ggatcccagg	taccacgtcc	960
atggagaaga	tctggacaag	ctccacagag	ctgcctgggtg	gggtaaagtc	cccagaaagg	1020
atctcatcgt	catgctcagg	gacacggatg	tgaacaagag	ggacaagcaa	aagaggactg	1080
ctctacatct	ggcctctgcc	aatgggaatt	cagaagtagt	aaaactcgtg	ctggacagac	1140
gatgtcaact	taatgtcctt	gacaacaaaa	agaggacagc	tctgacaaag	gccgtacaat	1200
gccaggaaga	tgaatgtgcg	ttaatgtttg	tggaaacatg	cactgatcca	aatattccag	1260
atgagtatgg	aaataccact	ctacactatg	ctgtctacaa	tgaagataaa	ttaatggcca	1320
aagcactgct	cttatacggg	gctgatatcg	aatcaaaaaa	caagcatggc	ctcacaccac	1380
tgctactttg	tatacatgag	caaaaacagc	aagtgggtgaa	atttttaatc	aagaaaaaag	1440
cgaatttaaa	tgcgctggat	agatatggaa	gaactgctct	catacttgct	gtatgtttgtg	1500
gatcagcaag	tatagtcagc	cctctacttg	agcaaaatgt	tgatgtatct	tctcaagatc	1560
tggaaagacg	gccagagagt	atgctgtttc	tagtcatcat	catgtaattt	gccagttact	1620
ttctgactac	aaagaaaaac	agatgttaaa	aatctcttct	gaaaacagca	atccagaaca	1680
agacttaaa	ctgacatcag	aggaagagtc	acaaaggctt	aaaggaagtg	aaaacagcca	1740
gccagaggca	ctgaaacttt	taaatttaaa	cttttggttt	aatgtttttt	ttttttgcct	1800
taataatatt	agatagtccc	aaatgaaatw	acctatgaga	ctaggctttg	agaatcaata	1860
gattcttttt	ttaagaatct	tttggctagg	agcgggtgtc	cacgcctgta	attccagcac	1920
cttgagaggc	tgaggtgggc	agatcacgag	atcaggagat	cgagaccatc	ctggctaaca	1980
cgggtgaaacc	ccatctctac	taaaaataca	aaaacttagc	tgggtgtggg	ggcgggtgcc	2040
tgtagtccca	gctactcagg	argctgaggc	aggagaatgg	catgaacccg	ggaggtggag	2100
gttgacgtga	gccgagatcc	gccactacac	tccagcctgg	gtgacagagc	aagactctgt	2160
ctcaaaaaaa	aaaaaaaaaa	aaaa				2184

<210> 371
 <211> 1855
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(1855)
 <223> n = A,T,C or G

<400> 371

tgcacgcac	ggccagtgtc	tgtgccacgt	acactgacgc	cccctgagat	gtgcacgccg	60
cacgcgcacg	ttgcacgcgc	ggcagcggct	tggctggcct	gtaacggctt	gcacgcgcac	120
gccgcccccg	cataaccgtc	agactggcct	gtaacggctt	gcaggcgcac	gccgcacgcg	180
cgtaacggct	tggctgccct	gtaacggctt	gcacgtgcat	gctgcacgcg	cgtaacggc	240
ttggctggca	tgtagccgct	tggcttggt	ttgcattytt	tgctkggctk	ggcgttgkty	300
tcttggtattg	acgcttcctc	cttgatkgc	cgtttcctcc	ttggatkgac	gtttcytyty	360
tcgcgttcct	ttgctggact	tgacctttty	tctgctgggt	ttggcattcc	tttgggggtg	420
gctgggtgtt	ttctccgggg	gggkkgccc	ttctgggggt	gggcgtgggk	cgccccagg	480
gggcgtgggc	tttccccggg	tgggtgtggg	tttctctggg	gtgggggtggg	ctgtgctggg	540
atccccctgc	tgggggtggc	agggattgac	ttttttcttc	aaacagattg	gaaacccgga	600
gtaacntgct	agttggtgaa	actggttggg	agacgcgac	tgctggtact	actgtttctc	660
ctggctgtta	aaagcagatg	gtggctgagg	ttgattcaat	gccggctgct	tcttctgtga	720
agaagccatt	tgggtctcagg	agcaagatgg	gcaagtgggtg	cgccactgct	tccccctgctg	780
caggggggagc	ggcaagagca	acgtggggcac	ttctgggagac	cacaacgact	cctctgtgaa	840
gacgcttggg	agcaagaggt	gcaagtgggtg	ctgcccactg	cttccccctgc	tgcaagggag	900
cggcaagagc	aacgtggkcg	cttgggggaga	ctacgatgac	agcgcccttca	tggakccag	960
gtaccagctc	crtggagaag	atctggacaa	gctccacaga	gctgcctggg	ggggtaaagt	1020
ccccagaaaag	gatctcatcg	tcattgctcag	ggacactgay	gtgaacaaga	rggacaagca	1080
aaagaggact	gctctacatc	tggcctctgc	caatgggaat	tcagaagtag	taaaactcgt	1140
gctggacaga	cgatgtcaac	ttaatgtcct	tgacaacaaa	aagaggacag	ctctgacaaa	1200
ggccgtacaa	tgccaggaag	atgaatgtgc	gttaatgttg	ctggaacatg	gcactgatcc	1260
aaatatccca	gatgagtatg	gaaataccac	tctacactat	gctgtctaca	atgaagataa	1320
attaatggcc	aaagcactgc	tcttatacgg	tgctgatatc	gaatcaaaaa	acaaggtata	1380
gatctactaa	ttttatcttc	aaaatactga	aatgcattca	ttttaacatt	gacgtgtgta	1440
agggccagtc	ttccgtatct	ggaagctcaa	gcataacttg	aatgaaaata	ttttgaaatg	1500
acctaattat	ctaagacttt	attttaata	ttgttatctt	caaagaagca	ttagagggtg	1560
cagttttttt	tttttaaatg	cacttctggt	aaatactttt	gttgaaaaca	ctgaatttgt	1620
aaaaggtaat	acttactatt	tttcaatttt	tccctcctag	gatttttttt	ccctaattgaa	1680
tgtaagatgg	caaaatttgc	cctgaaatag	gttttacatg	aaaactccaa	gaaaagttaa	1740
acatgtttca	gtgaatagag	atcctgctcc	tttggaagt	tcctaaaaaa	cagtaataga	1800
tacgaggtga	tgcgcctgtc	agtggcaagg	tttaagatat	ttctgatctc	gtgcc	1855

<210> 372
 <211> 1059
 <212> DNA
 <213> Homo sapien

<400> 372

gcaacgtggg	cacttctgga	gaccacaacg	actcctctgt	gaagacgctt	gggagcaaga	60
ggtgcaagtg	gtgctgcca	ctgcttcccc	tgctgcaggg	gagcggcaag	agcaacgtgg	120
gcgcttgrgg	agactmcgat	gacagygcct	tcattggagcc	caggtaccac	gtccgtggag	180
aagatctgga	caagctccac	agagctgccc	tgggtggggta	aagtccccag	aaaggatctc	240
atcgatcatg	tcagggacac	tgaygtgaac	aagarggaca	agcaaaagag	gactgctcta	300
catctggcct	ctgccaatgg	gaattcagaa	gtagtataaac	tcstgctgga	cagacgatgt	360

caacttaatg	tccttgacaa	caaaaagagg	acagctctga	yaaaggccgt	acaatgccag	420
gaagatgaat	gtgctgtaat	gttgctggaa	catggcactg	atccaaatat	tccagatgag	480
tatggaaata	ccactctrca	ctaygctrct	tayaatgaag	ataaattaat	ggccaaagca	540
ctgctcttat	ayggtgctga	tatcgaatca	aaaaacaagg	tatagatcta	ctaattttat	600
cttcaaaata	ctgaaatgca	ttcattttta	cattgacgtg	tgtaaagggc	agtcttccgt	660
atttggaagc	tcaagcataa	cttgaatgaa	aatattttga	aatgacctaa	ttatctaaga	720
ctttatttta	aatattgtta	ttttcaaaga	agcattagag	ggtacagttt	ttttttttta	780
aatgcacttc	tggtaaatac	ttttgttgaa	aacactgaat	ttgtaaaagg	taatacttac	840
tattttttcaa	tttttccctc	ctaggatttt	tttcccctaa	tgaatgtaag	atggcaaaat	900
ttgccctgaa	ataggtttta	catgaaaact	ccaagaaaag	ttaaacaatgt	ttcagtgaat	960
agagatcctg	ctcctttggc	aagttcctaa	aaaacagtaa	tagatacgag	gtgatgcgcc	1020
tgtcagtggc	aaggtttaag	atattttctga	tctcgtgcc			1059

<210> 373

<211> 1155

<212> DNA

<213> Homo sapien

<400> 373

atggtggttg	aggttgattc	catgccggct	gcctcttctg	tgaagaagcc	atttggtctc	60
aggagcaaga	tgggcaagtg	gtgctgccgt	tgcttcccc	gctgcaggga	gagcggcaag	120
agcaacgtgg	gcacttctgg	agaccacgac	gactctgcta	tgaagacact	caggagcaag	180
atgggcaagt	ggtgccgcca	ctgcttcccc	tgctgcaggg	ggagtggcaa	gagcaacgtg	240
ggcgcttctg	gagaccacga	cgactctgct	atgaagacac	tcaggaacaa	gatgggcaag	300
tgggtgctgcc	actgcttccc	ctgctgcagg	gggagcggca	agagcaaggt	gggcgcttgg	360
ggagactacg	atgacagtgc	cttcatggag	cccagggtacc	acgtccgtgg	agaagatctg	420
gacaagctcc	acagagctgc	ctgggtgggg	aaagtcccca	gaaaggatct	catcgtcatg	480
ctcagggaca	ctgacgtgaa	caagaaggac	aagcaaaaaga	ggactgctct	acatctggcc	540
tctgccaatg	ggaattcaga	agtagtaaaa	ctcctgctgg	acagacgatg	tcaacttaat	600
gtccttgaca	acaaaaagag	gacagctctg	ataaaggccg	tacaatgcca	ggaagatgaa	660
tgtgctgtaa	tgctgctgga	acatggcact	gatccaaata	ttccagatga	gtatggaaat	720
accactctgc	actacgctat	ctataatgaa	gataaattaa	tggccaaagc	actgctctta	780
tatggtgctg	atatcgaatc	aaaaaacaag	catggcctca	caccactgtt	acttggtgta	840
catgagcaaa	aacagcaagt	cgtgaaatct	ttaatcaaga	aaaaagcgaa	tttaaagtga	900
ctggatagat	atggaaggac	tgctctcata	cttgctgtat	gttggtggtc	agcaagtata	960
gtcagccttc	tacttgagca	aaatattgat	gtatcttctc	aagatctatc	tggacagacg	1020
gccagagagt	atgctgtttc	tagtcatcat	catgtaattt	gccagttact	ttctgactac	1080
aaagaaaaac	agatgctaaa	aatctcttct	gaaaacagca	atccagaaaa	tgtctcaaga	1140
accagaaata	aataa					1155

<210> 374

<211> 2000

<212> DNA

<213> Homo sapien

<400> 374

atggtggttg	aggttgattc	catgccggct	gcctcttctg	tgaagaagcc	atttggtctc	60
aggagcaaga	tgggcaagtg	gtgctgccgt	tgcttcccc	gctgcaggga	gagcggcaag	120
agcaacgtgg	gcacttctgg	agaccacgac	gactctgcta	tgaagacact	caggagcaag	180
atgggcaagt	ggtgccgcca	ctgcttcccc	tgctgcaggg	ggagtggcaa	gagcaacgtg	240
ggcgcttctg	gagaccacga	cgactctgct	atgaagacac	tcaggaacaa	gatgggcaag	300
tgggtgctgcc	actgcttccc	ctgctgcagg	gggagcggca	agagcaaggt	gggcgcttgg	360
ggagactacg	atgacagtgc	cttcatggag	cccagggtacc	acgtccgtgg	agaagatctg	420
gacaagctcc	acagagctgc	ctgggtgggg	aaagtcccca	gaaaggatct	catcgtcatg	480
ctcagggaca	ctgacgtgaa	caagaaggac	aaacaaaaga	ggactgctct	acatctggcc	540

tctgccaatg	ggaattcaga	agtagtaaaa	ctcctgctgg	acagacgatg	tcaacttaat	600
gtccttgaca	acaaaaagag	gacagctctg	ataaaggccg	tacaatgcca	ggaagatgaa	660
tgtgcgtaaa	tgttgctgga	acatggcact	gatccaaata	ttccagatga	gtatggaaat	720
accactctgc	actacgctat	ctataatgaa	gataaattaa	tggccaaagc	actgctctta	780
tatggtgctg	atatcgaatc	aaaaaacaag	catggcctca	caccactgtt	acttggtgta	840
catgagcaaa	aacagcaagt	cgtgaaatct	ttaatcaaga	aaaaagcgaa	tttaaatagca	900
ctggatagat	atggaaggac	tgctctcata	cttgctgtat	gttggtggatc	agcaagtata	960
gtcagccttc	tacttgagca	aaatattgat	gtatcttctc	aagatctatc	tggacagacg	1020
gccagagagt	atgctgtttc	tagtcatcat	catgtaattt	gccagttact	ttctgactac	1080
aaagaaaaac	agatgctaaa	aatctcttct	gaaaacagca	atccagaaca	agacttaaaag	1140
ctgacatcag	aggaagagtc	acaaagggtc	aaaggcagtg	aaaatagcca	gccagagaaa	1200
atgtctcaag	aaccagaaat	aaataaggat	ggtgatagag	aggttgaaga	agaaatgaag	1260
aagcatgaaa	gtaataatgt	gggattacta	gaaaacctga	ctaattggtgt	cactgctggc	1320
aatggtgata	atggattaat	tcctcaaagg	aagagcagaa	cacctgaaaa	tcagcaattt	1380
cctgacaacg	aaagtgaaga	gtatcacaga	atttgcgaa	tagtttctga	ctacaaagaa	1440
aaacagatgc	caaaatactc	ttctgaaaac	agcaaccag	aacaagactt	aaagctgaca	1500
tcagaggaag	agtcacaaag	gcttgaggcg	agtgaataatg	gccagccaga	gctagaaaat	1560
tttatggcta	tcgaagaaat	gaagaagcac	ggaagtactc	atgtcggatt	cccagaaaac	1620
ctgactaatg	gtgccactgc	tggcaatggt	gatgatggat	taattcctcc	aaggaagagc	1680
agaacacctg	aaagccagca	atttcctgac	actgagaatg	aagagtatca	cagtgcagaa	1740
caaaatgata	ctcagaagca	atcttgatgaa	gaacagaaca	ctggaatatt	acacgatgag	1800
attctgattc	atgaagaaaa	gcagatagaa	gtgggtgaaa	aatgaattc	tgagctttct	1860
cttagttgta	agaaagaaaa	agacatcttg	catgaaaata	gtacgttgcg	ggaagaaatt	1920
gccatgctaa	gactggagct	agacacaatg	aaacatcaga	gccagctaaa	aaaaaiaaaaa	1980
aaaaaaaaaa	aaaaaaaaaa					2000

<210> 375

<211> 2040

<212> DNA

<213> Homo sapien

<400> 375

atggtggttg	aggttgattc	catgccggct	gcctcttctg	tgaagaagcc	atcttggtctc	60
aggagcaaga	tgggcaagtg	gtgctgccgt	tgcttcccc	gctgcaggga	gagcggcaag	120
agcaacgtgg	gcacttctgg	agaccacgac	gactctgcta	tgaagacact	caggagcaag	180
atgggcaagt	ggtgccgcca	ctgcttcccc	tgctgcagg	ggagtggcaa	gagcaacgtg	240
ggcgcttctg	gagaccacga	cgactctgct	atgaagacac	tcaggaacaa	gatgggcaag	300
tgggtgctgcc	actgcttccc	ctgctgcagg	gggagcggca	agagcaaggt	ggcgcttgg	360
ggagactacg	atgacagtgc	cttcatggag	cccagggtacc	acgtccgtgg	agaagatctg	420
gacaagctcc	acagagctgc	ctgggtgggt	aaagtcccca	gaaaggatct	catcgctcatg	480
ctcagggaca	ctgacgtgaa	caagaaggac	aagcaaaaaga	ggactgctct	acatctggcc	540
tctgccaatg	ggaattcaga	agtagtaaaa	ctcctgctgg	acagacgatg	tcaacttaat	600
gtccttgaca	acaaaaagag	gacagctctg	ataaaggccg	tacaatgcca	ggaagatgaa	660
tgtgcgtaaa	tgttgctgga	acatggcact	gatccaaata	ttccagatga	gtatggaaat	720
accactctgc	actacgctat	ctataatgaa	gataaattaa	tggccaaagc	actgctctta	780
tatggtgctg	atatcgaatc	aaaaaacaag	catggcctca	caccactgtt	acttggtgta	840
catgagcaaa	aacagcaagt	cgtgaaatct	ttaatcaaga	aaaaagcgaa	tttaaatagca	900
ctggatagat	atggaaggac	tgctctcata	cttgctgtat	gttggtggatc	agcaagtata	960
gtcagccttc	tacttgagca	aaatattgat	gtatcttctc	aagatctatc	tggacagacg	1020
gccagagagt	atgctgtttc	tagtcatcat	catgtaattt	gccagttact	ttctgactac	1080
aaagaaaaac	agatgctaaa	aatctcttct	gaaaacagca	atccagaaca	agacttaaaag	1140
ctgacatcag	aggaagagtc	acaaagggtc	aaaggcagtg	aaaatagcca	gccagagaaa	1200
atgtctcaag	aaccagaaat	aaataaggat	ggtgatagag	aggttgaaga	agaaatgaag	1260
aagcatgaaa	gtaataatgt	gggattacta	gaaaacctga	ctaattggtgt	cactgctggc	1320
aatggtgata	atggattaat	tcctcaaagg	aagagcagaa	cacctgaaaa	tcagcaattt	1380

```

cctgacaacg aaagtgaaga gtatcacaga atttgcgaat tagtttctga ctacaaagaa 1440
aaacagatgc caaaatactc ttctgaaaac agcaaccag aacaagactt aaagctgaca 1500
tcagaggaag agtcacaaag gcttgagggc agtgaaaatg gccagccaga gaaaagatct 1560
caagaaccag aaataaataa ggatggtgat agagagctag aaaattttat ggctatcgaa 1620
gaaatgaaga agcacggaag tactcatgtc ggattcccag aaaacctgac taatggtgcc 1680
actgctggca atggtgatga tggattaatt cctccaagga agagcagaac acctgaaagc 1740
cagcaatttc ctgacactga gaatgaagag tatcacagt acgaacaaaa tgatactcag 1800
aagcaatttt gtgaagaaca gaacactgga atattacacg atgagattct gattcatgaa 1860
gaaaagcaga tagaagtggg tgaaaaaatg aattctgagc tttctcttag ttgtaagaaa 1920
gaaaaagaca tcttgcatga aaatagtacg ttgcgggaag aaattgccat gctaagactg 1980
gagctagaca caatgaaaca tcagagccag ctaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 2040

```

<210> 376

<211> 329

<212> PRT

<213> Homo sapien

<400> 376

```

Met Asp Ile Val Val Ser Gly Ser His Pro Leu Trp Val Asp Ser Phe
1      5      10      15
Leu His Leu Ala Gly Ser Asp Leu Leu Ser Arg Ser Leu Met Ala Glu
20     25     30
Glu Tyr Thr Ile Val His Ala Ser Phe Ile Ser Cys Ile Ser Ser Ser
35     40     45
Leu Asp Gly Gln Gly Glu Arg Gln Glu Gln Arg Gly His Phe Trp Arg
50     55     60
Pro Gln Arg Leu Leu Cys Glu Asp Ala Trp Glu Gln Glu Val Gln Val
65     70     75     80
Val Leu Pro Leu Leu Pro Leu Leu Gln Gly Ser Gly Lys Ser Asn Val
85     90     95
Val Ala Trp Gly Asp Tyr Asp Asp Ser Ala Phe Met Asp Pro Arg Tyr
100    105    110
His Val His Gly Glu Asp Leu Asp Lys Leu His Arg Ala Ala Trp Trp
115    120    125
Gly Lys Val Pro Arg Lys Asp Leu Ile Val Met Leu Arg Asp Thr Asp
130    135    140
Val Asn Lys Arg Asp Lys Gln Lys Arg Thr Ala Leu His Leu Ala Ser
145    150    155    160
Ala Asn Gly Asn Ser Glu Val Val Lys Leu Val Leu Asp Arg Arg Cys
165    170    175
Gln Leu Asn Val Leu Asp Asn Lys Lys Arg Thr Ala Leu Thr Lys Ala
180    185    190
Val Gln Cys Gln Glu Asp Glu Cys Ala Leu Met Leu Leu Glu His Gly
195    200    205
Thr Asp Pro Asn Ile Pro Asp Glu Tyr Gly Asn Thr Thr Leu His Tyr
210    215    220
Ala Val Tyr Asn Glu Asp Lys Leu Met Ala Lys Ala Leu Leu Leu Tyr
225    230    235    240
Gly Ala Asp Ile Glu Ser Lys Asn Lys His Gly Leu Thr Pro Leu Leu
245    250    255
Leu Gly Ile His Glu Gln Lys Gln Gln Val Val Lys Phe Leu Ile Lys
260    265    270
Lys Lys Ala Asn Leu Asn Ala Leu Asp Arg Tyr Gly Arg Thr Ala Leu
275    280    285
Ile Leu Ala Val Cys Cys Gly Ser Ala Ser Ile Val Ser Pro Leu Leu

```

290		295		300											
Glu	Gln	Asn	Val	Asp	Val	Ser	Ser	Gln	Asp	Leu	Glu	Arg	Arg	Pro	Glu
305					310					315					320
Ser	Met	Leu	Phe	Leu	Val	Ile	Ile	Met							
				325											

<210> 377
 <211> 148
 <212> PRT
 <213> Homo sapien

<220>
 <221> VARIANT
 <222> (1)...(148)
 <223> Xaa = Any Amino Acid

<400>	377														
Met	Thr	Xaa	Pro	Ser	Trp	Ser	Pro	Gly	Thr	Thr	Ser	Val	Glu	Lys	Ile
1			5						10					15	
Trp	Thr	Ser	Ser	Thr	Glu	Leu	Pro	Trp	Trp	Gly	Lys	Val	Pro	Arg	Lys
			20					25					30		
Asp	Leu	Ile	Val	Met	Leu	Arg	Asp	Thr	Asp	Val	Asn	Lys	Xaa	Asp	Lys
	35					40					45				
Gln	Lys	Arg	Thr	Ala	Leu	His	Leu	Ala	Ser	Ala	Asn	Gly	Asn	Ser	Glu
	50					55					60				
Val	Val	Lys	Leu	Xaa	Leu	Asp	Arg	Arg	Cys	Gln	Leu	Asn	Val	Leu	Asp
65					70					75					80
Asn	Lys	Lys	Arg	Thr	Ala	Leu	Xaa	Lys	Ala	Val	Gln	Cys	Gln	Glu	Asp
			85						90					95	
Glu	Cys	Ala	Leu	Met	Leu	Leu	Glu	His	Gly	Thr	Asp	Pro	Asn	Ile	Pro
			100					105					110		
Asp	Glu	Tyr	Gly	Asn	Thr	Thr	Leu	His	Tyr	Ala	Xaa	Tyr	Asn	Glu	Asp
	115					120						125			
Lys	Leu	Met	Ala	Lys	Ala	Leu	Leu	Leu	Tyr	Gly	Ala	Asp	Ile	Glu	Ser
	130					135					140				
Lys	Asn	Lys	Val												
145															

<210> 378
 <211> 1719
 <212> PRT
 <213> Homo sapien

<400>	378														
Met	Val	Val	Glu	Val	Asp	Ser	Met	Pro	Ala	Ala	Ser	Ser	Val	Lys	Lys
1				5					10					15	
Pro	Phe	Gly	Leu	Arg	Ser	Lys	Met	Gly	Lys	Trp	Cys	Cys	Arg	Cys	Phe
			20					25					30		
Pro	Cys	Cys	Arg	Glu	Ser	Gly	Lys	Ser	Asn	Val	Gly	Thr	Ser	Gly	Asp
	35					40					45				
His	Asp	Asp	Ser	Ala	Met	Lys	Thr	Leu	Arg	Ser	Lys	Met	Gly	Lys	Trp
	50					55					60				
Cys	Arg	His	Cys	Phe	Pro	Cys	Cys	Arg	Gly	Ser	Gly	Lys	Ser	Asn	Val
65					70					75					80
Gly	Ala	Ser	Gly	Asp	His	Asp	Asp	Ser	Ala	Met	Lys	Thr	Leu	Arg	Asn

[illegible]


```

Asp Lys Leu His Arg Ala Ala Trp Trp Gly Lys Val Pro Arg Lys Asp
530                               535                               540
Leu Ile Val Met Leu Arg Asp Thr Asp Val Asn Lys Lys Asp Lys Gln
545                               550                               555                               560
Lys Arg Thr Ala Leu His Leu Ala Ser Ala Asn Gly Asn Ser Glu Val
565                               570                               575
Val Lys Leu Leu Leu Asp Arg Arg Cys Gln Leu Asn Val Leu Asp Asn
580                               585                               590
Lys Lys Arg Thr Ala Leu Ile Lys Ala Val Gln Cys Gln Glu Asp Glu
595                               600                               605
Cys Ala Leu Met Leu Leu Glu His Gly Thr Asp Pro Asn Ile Pro Asp
610                               615                               620
Glu Tyr Gly Asn Thr Thr Leu His Tyr Ala Ile Tyr Asn Glu Asp Lys
625                               630                               635                               640
Leu Met Ala Lys Ala Leu Leu Leu Tyr Gly Ala Asp Ile Glu Ser Lys
645                               650                               655
Asn Lys His Gly Leu Thr Pro Leu Leu Leu Gly Val His Glu Gln Lys
660                               665                               670
Gln Gln Val Val Lys Phe Leu Ile Lys Lys Lys Ala Asn Leu Asn Ala
675                               680                               685
Leu Asp Arg Tyr Gly Arg Thr Ala Leu Ile Leu Ala Val Cys Cys Gly
690                               695                               700
Ser Ala Ser Ile Val Ser Leu Leu Leu Glu Gln Asn Ile Asp Val Ser
705                               710                               715                               720
Ser Gln Asp Leu Ser Gly Gln Thr Ala Arg Glu Tyr Ala Val Ser Ser
725                               730                               735
His His His Val Ile Cys Gln Leu Leu Ser Asp Tyr Lys Glu Lys Gln
740                               745                               750
Met Leu Lys Ile Ser Ser Glu Asn Ser Asn Pro Glu Gln Asp Leu Lys
755                               760                               765
Leu Thr Ser Glu Glu Glu Ser Gln Arg Phe Lys Gly Ser Glu Asn Ser
770                               775                               780
Gln Pro Glu Lys Met Ser Gln Glu Pro Glu Ile Asn Lys Asp Gly Asp
785                               790                               795                               800
Arg Glu Val Glu Glu Glu Met Lys Lys His Glu Ser Asn Asn Val Gly
805                               810                               815
Leu Leu Glu Asn Leu Thr Asn Gly Val Thr Ala Gly Asn Gly Asp Asn
820                               825                               830
Gly Leu Ile Pro Gln Arg Lys Ser Arg Thr Pro Glu Asn Gln Gln Phe
835                               840                               845
Pro Asp Asn Glu Ser Glu Glu Tyr His Arg Ile Cys Glu Leu Val Ser
850                               855                               860
Asp Tyr Lys Glu Lys Gln Met Pro Lys Tyr Ser Ser Glu Asn Ser Asn
865                               870                               875                               880
Pro Glu Gln Asp Leu Lys Leu Thr Ser Glu Glu Glu Ser Gln Arg Leu
885                               890                               895
Glu Gly Ser Glu Asn Gly Gln Pro Glu Leu Glu Asn Phe Met Ala Ile
900                               905                               910
Glu Glu Met Lys Lys His Gly Ser Thr His Val Gly Phe Pro Glu Asn
915                               920                               925
Leu Thr Asn Gly Ala Thr Ala Gly Asn Gly Asp Asp Gly Leu Ile Pro
930                               935                               940
Pro Arg Lys Ser Arg Thr Pro Glu Ser Gln Gln Phe Pro Asp Thr Glu
945                               950                               955                               960
Asn Glu Glu Tyr His Ser Asp Glu Gln Asn Asp Thr Gln Lys Gln Phe

```

965 970 975
 Cys Glu Glu Gln Asn Thr Gly Ile Leu His Asp Glu Ile Leu Ile His
 980 985 990
 Glu Glu Lys Gln Ile Glu Val Val Glu Lys Met Asn Ser Glu Leu Ser
 995 1000 1005
 Leu Ser Cys Lys Lys Glu Lys Asp Ile Leu His Glu Asn Ser Thr Leu
 1010 1015 1020
 Arg Glu Glu Ile Ala Met Leu Arg Leu Glu Leu Asp Thr Met Lys His
 1025 1030 1035 104
 Gln Ser Gln Leu Pro Arg Thr His Met Val Val Glu Val Asp Ser Met
 1045 1050 1055
 Pro Ala Ala Ser Ser Val Lys Lys Pro Phe Gly Leu Arg Ser Lys Met
 1060 1065 1070
 Gly Lys Trp Cys Cys Arg Cys Phe Pro Cys Cys Arg Glu Ser Gly Lys
 1075 1080 1085
 Ser Asn Val Gly Thr Ser Gly Asp His Asp Asp Ser Ala Met Lys Thr
 1090 1095 1100
 Leu Arg Ser Lys Met Gly Lys Trp Cys Arg His Cys Phe Pro Cys Cys
 1105 1110 1115 112
 Arg Gly Ser Gly Lys Ser Asn Val Gly Ala Ser Gly Asp His Asp Asp
 1125 1130 1135
 Ser Ala Met Lys Thr Leu Arg Asn Lys Met Gly Lys Trp Cys Cys His
 1140 1145 1150
 Cys Phe Pro Cys Cys Arg Gly Ser Gly Lys Ser Lys Val Gly Ala Trp
 1155 1160 1165
 Gly Asp Tyr Asp Asp Ser Ala Phe Met Glu Pro Arg Tyr His Val Arg
 1170 1175 1180
 Gly Glu Asp Leu Asp Lys Leu His Arg Ala Ala Trp Trp Gly Lys Val
 1185 1190 1195 120
 Pro Arg Lys Asp Leu Ile Val Met Leu Arg Asp Thr Asp Val Asn Lys
 1205 1210 1215
 Lys Asp Lys Gln Lys Arg Thr Ala Leu His Leu Ala Ser Ala Asn Gly
 1220 1225 1230
 Asn Ser Glu Val Val Lys Leu Leu Asp Arg Arg Cys Gln Leu Asn
 1235 1240 1245
 Val Leu Asp Asn Lys Lys Arg Thr Ala Leu Ile Lys Ala Val Gln Cys
 1250 1255 1260
 Gln Glu Asp Glu Cys Ala Leu Met Leu Leu Glu His Gly Thr Asp Pro
 1265 1270 1275 128
 Asn Ile Pro Asp Glu Tyr Gly Asn Thr Thr Leu His Tyr Ala Ile Tyr
 1285 1290 1295
 Asn Glu Asp Lys Leu Met Ala Lys Ala Leu Leu Leu Tyr Gly Ala Asp
 1300 1305 1310
 Ile Glu Ser Lys Asn Lys His Gly Leu Thr Pro Leu Leu Leu Gly Val
 1315 1320 1325
 His Glu Gln Lys Gln Gln Val Val Lys Phe Leu Ile Lys Lys Lys Ala
 1330 1335 1340
 Asn Leu Asn Ala Leu Asp Arg Tyr Gly Arg Thr Ala Leu Ile Leu Ala
 1345 1350 1355 136
 Val Cys Cys Gly Ser Ala Ser Ile Val Ser Leu Leu Leu Glu Gln Asn
 1365 1370 1375
 Ile Asp Val Ser Ser Gln Asp Leu Ser Gly Gln Thr Ala Arg Glu Tyr
 1380 1385 1390
 Ala Val Ser Ser His His His Val Ile Cys Gln Leu Leu Ser Asp Tyr
 1395 1400 1405

Lys Glu Lys Gln Met Leu Lys Ile Ser Ser Glu Asn Ser Asn Pro Glu
 1410 1415 1420
 Gln Asp Leu Lys Leu Thr Ser Glu Glu Glu Ser Gln Arg Phe Lys Gly
 1425 1430 1435 144
 Ser Glu Asn Ser Gln Pro Glu Lys Met Ser Gln Glu Pro Glu Ile Asn
 1445 1450 1455
 Lys Asp Gly Asp Arg Glu Val Glu Glu Glu Met Lys Lys His Glu Ser
 1460 1465 1470
 Asn Asn Val Gly Leu Leu Glu Asn Leu Thr Asn Gly Val Thr Ala Gly
 1475 1480 1485
 Asn Gly Asp Asn Gly Leu Ile Pro Gln Arg Lys Ser Arg Thr Pro Glu
 1490 1495 1500
 Asn Gln Gln Phe Pro Asp Asn Glu Ser Glu Glu Tyr His Arg Ile Cys
 1505 1510 1515 152
 Glu Leu Val Ser Asp Tyr Lys Glu Lys Gln Met Pro Lys Tyr Ser Ser
 1525 1530 1535
 Glu Asn Ser Asn Pro Glu Gln Asp Leu Lys Leu Thr Ser Glu Glu Glu
 1540 1545 1550
 Ser Gln Arg Leu Glu Gly Ser Glu Asn Gly Gln Pro Glu Lys Arg Ser
 1555 1560 1565
 Gln Glu Pro Glu Ile Asn Lys Asp Gly Asp Arg Glu Leu Glu Asn Phe
 1570 1575 1580
 Met Ala Ile Glu Glu Met Lys Lys His Gly Ser Thr His Val Gly Phe
 1585 1590 1595 160
 Pro Glu Asn Leu Thr Asn Gly Ala Thr Ala Gly Asn Gly Asp Asp Gly
 1605 1610 1615
 Leu Ile Pro Pro Arg Lys Ser Arg Thr Pro Glu Ser Gln Gln Phe Pro
 1620 1625 1630
 Asp Thr Glu Asn Glu Glu Tyr His Ser Asp Glu Gln Asn Asp Thr Gln
 1635 1640 1645
 Lys Gln Phe Cys Glu Glu Gln Asn Thr Gly Ile Leu His Asp Glu Ile
 1650 1655 1660
 Leu Ile His Glu Glu Lys Gln Ile Glu Val Val Glu Lys Met Asn Ser
 1665 1670 1675 168
 Glu Leu Ser Leu Ser Cys Lys Lys Glu Lys Asp Ile Leu His Glu Asn
 1685 1690 1695
 Ser Thr Leu Arg Glu Glu Ile Ala Met Leu Arg Leu Glu Leu Asp Thr
 1700 1705 1710
 Met Lys His Gln Ser Gln Leu
 1715

<210> 379

<211> 656

<212> PRT

<213> Homo sapien

<400> 379

Met Val Val Glu Val Asp Ser Met Pro Ala Ala Ser Ser Val Lys Lys
 1 5 10 15
 Pro Phe Gly Leu Arg Ser Lys Met Gly Lys Trp Cys Cys Arg Cys Phe
 20 25 30
 Pro Cys Cys Arg Glu Ser Gly Lys Ser Asn Val Gly Thr Ser Gly Asp
 35 40 45
 His Asp Asp Ser Ala Met Lys Thr Leu Arg Ser Lys Met Gly Lys Trp
 50 55 60

Cys Arg His Cys Phe Pro Cys Cys Arg Gly Ser Gly Lys Ser Asn Val
 65 70 75 80
 Gly Ala Ser Gly Asp His Asp Asp Ser Ala Met Lys Thr Leu Arg Asn
 85 90 95
 Lys Met Gly Lys Trp Cys Cys His Cys Phe Pro Cys Cys Arg Gly Ser
 100 105 110
 Gly Lys Ser Lys Val Gly Ala Trp Gly Asp Tyr Asp Asp Ser Ala Phe
 115 120 125
 Met Glu Pro Arg Tyr His Val Arg Gly Glu Asp Leu Asp Lys Leu His
 130 135 140
 Arg Ala Ala Trp Trp Gly Lys Val Pro Arg Lys Asp Leu Ile Val Met
 145 150 155 160
 Leu Arg Asp Thr Asp Val Asn Lys Lys Asp Lys Gln Lys Arg Thr Ala
 165 170 175
 Leu His Leu Ala Ser Ala Asn Gly Asn Ser Glu Val Val Lys Leu Leu
 180 185 190
 Leu Asp Arg Arg Cys Gln Leu Asn Val Leu Asp Asn Lys Lys Arg Thr
 195 200 205
 Ala Leu Ile Lys Ala Val Gln Cys Gln Glu Asp Glu Cys Ala Leu Met
 210 215 220
 Leu Leu Glu His Gly Thr Asp Pro Asn Ile Pro Asp Glu Tyr Gly Asn
 225 230 235 240
 Thr Thr Leu His Tyr Ala Ile Tyr Asn Glu Asp Lys Leu Met Ala Lys
 245 250 255
 Ala Leu Leu Leu Tyr Gly Ala Asp Ile Glu Ser Lys Asn Lys His Gly
 260 265 270
 Leu Thr Pro Leu Leu Leu Gly Val His Glu Gln Lys Gln Gln Val Val
 275 280 285
 Lys Phe Leu Ile Lys Lys Lys Ala Asn Leu Asn Ala Leu Asp Arg Tyr
 290 295 300
 Gly Arg Thr Ala Leu Ile Leu Ala Val Cys Cys Gly Ser Ala Ser Ile
 305 310 315 320
 Val Ser Leu Leu Leu Glu Gln Asn Ile Asp Val Ser Ser Gln Asp Leu
 325 330 335
 Ser Gly Gln Thr Ala Arg Glu Tyr Ala Val Ser Ser His His His Val
 340 345 350
 Ile Cys Gln Leu Leu Ser Asp Tyr Lys Glu Lys Gln Met Leu Lys Ile
 355 360 365
 Ser Ser Glu Asn Ser Asn Pro Glu Gln Asp Leu Lys Leu Thr Ser Glu
 370 375 380
 Glu Glu Ser Gln Arg Phe Lys Gly Ser Glu Asn Ser Gln Pro Glu Lys
 385 390 395 400
 Met Ser Gln Glu Pro Glu Ile Asn Lys Asp Gly Asp Arg Glu Val Glu
 405 410 415
 Glu Glu Met Lys Lys His Glu Ser Asn Asn Val Gly Leu Leu Glu Asn
 420 425 430
 Leu Thr Asn Gly Val Thr Ala Gly Asn Gly Asp Asn Gly Leu Ile Pro
 435 440 445
 Gln Arg Lys Ser Arg Thr Pro Glu Asn Gln Gln Phe Pro Asp Asn Glu
 450 455 460
 Ser Glu Glu Tyr His Arg Ile Cys Glu Leu Val Ser Asp Tyr Lys Glu
 465 470 475 480
 Lys Gln Met Pro Lys Tyr Ser Ser Glu Asn Ser Asn Pro Glu Gln Asp
 485 490 495
 Leu Lys Leu Thr Ser Glu Glu Glu Ser Gln Arg Leu Glu Gly Ser Glu

```
<210> 380
<211> 671
<212> PRT
<213> Homo sapien
```

BNSDOCID: <WO___0004149A2_I_>

225 230 235 240
 Thr Thr Leu His Tyr Ala Ile Tyr Asn Glu Asp Lys Leu Met Ala Lys
 245 250 255
 Ala Leu Leu Leu Tyr Gly Ala Asp Ile Glu Ser Lys Asn Lys His Gly
 260 265 270
 Leu Thr Pro Leu Leu Leu Gly Val His Glu Gln Lys Gln Gln Val Val
 275 280 285
 Lys Phe Leu Ile Lys Lys Lys Ala Asn Leu Asn Ala Leu Asp Arg Tyr
 290 295 300
 Gly Arg Thr Ala Leu Ile Leu Ala Val Cys Cys Gly Ser Ala Ser Ile
 305 310 315 320
 Val Ser Leu Leu Leu Glu Gln Asn Ile Asp Val Ser Ser Gln Asp Leu
 325 330 335
 Ser Gly Gln Thr Ala Arg Glu Tyr Ala Val Ser Ser His His His Val
 340 345 350
 Ile Cys Gln Leu Leu Ser Asp Tyr Lys Glu Lys Gln Met Leu Lys Ile
 355 360 365
 Ser Ser Glu Asn Ser Asn Pro Glu Gln Asp Leu Lys Leu Thr Ser Glu
 370 375 380
 Glu Glu Ser Gln Arg Phe Lys Gly Ser Glu Asn Ser Gln Pro Glu Lys
 385 390 395 400
 Met Ser Gln Glu Pro Glu Ile Asn Lys Asp Gly Asp Arg Glu Val Glu
 405 410 415
 Glu Glu Met Lys Lys His Glu Ser Asn Asn Val Gly Leu Leu Glu Asn
 420 425 430
 Leu Thr Asn Gly Val Thr Ala Gly Asn Gly Asp Asn Gly Leu Ile Pro
 435 440 445
 Gln Arg Lys Ser Arg Thr Pro Glu Asn Gln Gln Phe Pro Asp Asn Glu
 450 455 460
 Ser Glu Glu Tyr His Arg Ile Cys Glu Leu Val Ser Asp Tyr Lys Glu
 465 470 475 480
 Lys Gln Met Pro Lys Tyr Ser Ser Glu Asn Ser Asn Pro Glu Gln Asp
 485 490 495
 Leu Lys Leu Thr Ser Glu Glu Glu Ser Gln Arg Leu Glu Gly Ser Glu
 500 505 510
 Asn Gly Gln Pro Glu Lys Arg Ser Gln Glu Pro Glu Ile Asn Lys Asp
 515 520 525
 Gly Asp Arg Glu Leu Glu Asn Phe Met Ala Ile Glu Glu Met Lys Lys
 530 535 540
 His Gly Ser Thr His Val Gly Phe Pro Glu Asn Leu Thr Asn Gly Ala
 545 550 555 560
 Thr Ala Gly Asn Gly Asp Asp Gly Leu Ile Pro Pro Arg Lys Ser Arg
 565 570 575
 Thr Pro Glu Ser Gln Gln Phe Pro Asp Thr Glu Asn Glu Glu Tyr His
 580 585 590
 Ser Asp Glu Gln Asn Asp Thr Gln Lys Gln Phe Cys Glu Glu Gln Asn
 595 600 605
 Thr Gly Ile Leu His Asp Glu Ile Leu Ile His Glu Glu Lys Gln Ile
 610 615 620
 Glu Val Val Glu Lys Met Asn Ser Glu Leu Ser Leu Ser Cys Lys Lys
 625 630 635 640
 Glu Lys Asp Ile Leu His Glu Asn Ser Thr Leu Arg Glu Glu Ile Ala
 645 650 655
 Met Leu Arg Leu Glu Leu Asp Thr Met Lys His Gln Ser Gln Leu
 660 665 670

<210> 381
 <211> 251
 <212> DNA
 <213> Homo sapien

<400> 381

ggagaagcgt	ctgctggggc	aggaaggggt	ttccctgccc	tctcacctgt	ccctcaccaa	60
ggtaacatgc	ttcccctaag	ggtatcccaa	cccaggggcc	tcaccatgac	ctctgagggg	120
ccaatatccc	aggagaagca	ttggggagtt	gggggcaggt	gaaggaccca	ggactcacac	180
atcctggggc	tccaaggcag	aggagagggg	cctcaagaag	gtcaggagga	aaatccgtaa	240
caagcagtca	g					251

<210> 382
 <211> 3279
 <212> DNA
 <213> Homo sapiens

<400> 382

cttcctgcag	cccccatgct	ggtgaggggg	acgggcagga	acagtggacc	caacatggaa	60
atgctggagg	gtgtcaggaa	gtgatcgggc	tctggggcag	ggaggagggg	tggggagtg	120
cactgggagg	ggacatcctg	cagaaggtag	gagttagcaa	acacccgctg	caggggaggg	180
gagagccctg	cggcacctgg	gggagcagag	ggagcagcac	ctgccagggc	ctgggaggag	240
gggcctggag	ggcgtgagga	ggagcgaggg	ggctgcatgg	ctggagtggg	ggatcagggg	300
cagggcgcg	gatggcctca	cacagggaag	agagggcccc	tcctgcaggg	cctcacctgg	360
gccacaggag	gacactgctt	ttcctctgag	gagtcaggag	ctgtggatgg	tgctggacag	420
aagaaggaca	gggcctggct	caggtgtcca	gaggctgtcg	ctggcttccc	tttgggatca	480
gactgcaggg	agggagggcg	gcaggggtgt	ggggggagtg	acgatgagga	tgacctgggg	540
gtggctccag	gccttgcccc	tgcttggggc	ctcaccagc	ctccctcaca	gtctcctggc	600
cctcagttc	ttccctccac	tccatcctcc	atctggcctc	agtgggtcat	tctgatcact	660
gaactgacca	taccagccc	tgcccacggc	cctccatggc	tccccaatgc	cctggagagg	720
ggacatctag	tcagagagta	gtcctgaaga	ggtggcctct	gcgatgtgcc	tgtgggggca	780
gcaccttgca	gatggtccc	gccctcatcc	tgtgacctg	tctgcaggga	ctgtcctcct	840
ggaccttgcc	ccttgtgcag	gagctggacc	ctgaagtccc	ctcccatag	gccaagactg	900
gagccttggt	ccctctgttg	gactccctgc	ccatattctt	gtgggagtg	gttctggaga	960
catttctgtc	tgttcctgag	agctgggaat	tgctctcagt	catctgcctg	cgcgggtctg	1020
agagatggag	ttgcctaggc	agttattggg	gccaatcttt	ctcactgtgt	ctctcctcct	1080
ttacccttag	ggtgattctg	ggggccact	tgtctgtaat	ggtgtgcttc	aaggatcac	1140
atcatggggc	cctgagccat	gtgccctgcc	tgaagagcct	gctgtgtaca	ccaaggtggg	1200
gcattaccgg	aagtggatca	aggacaccat	cgcagccaac	ccctgagtgc	ccctgtccca	1260
cccctacctc	tagtaaattt	aagtccacct	cacgttctgg	catcacttgg	cctttctgga	1320
tgctggacac	ctgaagcttg	gaactcacct	ggccgaagct	cgagcctcct	gagtcctact	1380
gacctgtgct	ttctgggtgtg	gagtcacagg	ctgctaggaa	aagggaatggg	cagacacagg	1440
tgtatgccaa	tgtttctgaa	atgggtataa	tttcgtcctc	tccttcggaa	cactggctgt	1500
ctctgaagac	ttctcgctca	gtttcagtga	ggacacacac	aaagacgtgg	gtgacctgt	1560
tgtttgtggg	gtgcagagat	gggaggggtg	gggccacccc	tggaagagt	gacagtgaca	1620
caaggtggac	actctctaca	gatcactgag	gataagctgg	agccacaatg	catgaggcac	1680
acacacagca	aggttgacgc	tgtaaacata	gccacgctg	tcctgggggc	actgggaagc	1740
ctagataaag	ccgtgagcag	aaagaagggg	aggatcctcc	tatgttgttg	aaggagggac	1800
tagggggaga	aactgaaagc	tgattaatta	caggaggttt	gttcaggtcc	cccaaaccac	1860
cgtcagattt	gatgatttcc	tagcaggact	tacagaaata	aagagctatc	atgctgtggg	1920
ttattatggg	ttgttacatt	gataggatac	atactgaaat	cagcaaacaa	aacagatgta	1980
tagattagag	tgtggagaaa	acagaggaaa	acttgcagtt	acgaagactg	gcaacttggc	2040
tttactaagt	tttcagactg	gcaggaagtc	aaacctatta	ggctgaggac	cttgtggagt	2100
gtagctgata	cagctgatag	aggaactagc	caggtggggg	cctttccctt	tggatggggg	2160

```

gcatatccga cagttattct ctccaagtgg agacttacgg acagcatata attctccctg 2220
caaggatgta tgataaatatg tacaaagtaa ttccaactga ggaagctcac ctgaccccta 2280
gtgtccagggt tttttactgg ggggtctgtag gacgagtatg gactacttga ataattgacc 2340
tgaagtcctc agacctgagg ttccctagag ttcaaacaga tacagcatgg tccagagtcc 2400
cagatgtaca aaaacaggga ttcatcacaa atcccatctt tagcatgaag ggtctggcat 2460
ggcccaaggc cccaagtata tcaaggcact tgggcagaac atgccaagga atcaaagtgc 2520
atctcccagg agttattcaa ggggtgagccc tttacttggg atgtacaggc tttgagcagt 2580
gcagggctgc tgagtcaacc ttttattgta caggggatga gggaaaggga gaggatgagg 2640
aagccccctt ggggatttgg tttggtcttg tgatcagggtg gtctatgggg ctatccctac 2700
aaagaagaat ccagaaatag gggcacattg aggaatgata ctgagcccaa agagcattca 2760
atcattgttt tatttgcctt cttttcacac cattggtgag ggagggatta ccaccctggg 2820
gttatgaaga tggttgaaca cccacacat agcaccggag atatgagatc aacagtttct 2880
tagccataga gattcacagc ccagagcagg aggacgctgc acaccatgca ggatgacatg 2940
ggggatgcgc tcgggattgg tgtgaagaag caaggactgt tagaggcagg ctttatagta 3000
acaagacggt ggggcaaaact ctgatttccg tgggggaatg tcatggtctt gctttactaa 3060
gttttgagac tggcaggtag tgaaactcat taggctgaga accttgtgga atgcagctga 3120
cccagctgat agaggaagta gccaggtggg agcctttccc agtgggtgtg ggacatatct 3180
ggcaagattt tgtggcactc ctggttacag atactggggc agcaaataaa actgaatctt 3240
gttttcagac cttaaaaaaaa aaaaaaaaaa aaaagttttt 3279

```

<210> 383

<211> 155

<212> PRT

<213> Homo sapiens

<400> 383

```

Met Ala Gly Val Arg Asp Gln Gly Gln Gly Ala Arg Trp Pro His Thr
      5                      10                      15
Gly Lys Arg Gly Pro Leu Leu Gln Gly Leu Thr Trp Ala Thr Gly Gly
      20                      25                      30
His Cys Phe Ser Ser Glu Glu Ser Gly Ala Val Asp Gly Ala Gly Gln
      35                      40                      45
Lys Lys Asp Arg Ala Trp Leu Arg Cys Pro Glu Ala Val Ala Gly Phe
      50                      55                      60
Pro Leu Gly Ser Asp Cys Arg Glu Gly Gly Arg Gln Gly Cys Gly Gly
      65                      70                      75                      80
Ser Asp Asp Glu Asp Asp Leu Gly Val Ala Pro Gly Leu Ala Pro Ala
      85                      90                      95
Trp Ala Leu Thr Gln Pro Pro Ser Gln Ser Pro Gly Pro Gln Ser Leu
      100                     105                     110
Pro Ser Thr Pro Ser Ser Ile Trp Pro Gln Trp Val Ile Leu Ile Thr
      115                     120                     125
Glu Leu Thr Ile Pro Ser Pro Ala His Gly Pro Pro Trp Leu Pro Asn
      130                     135                     140
Ala Leu Glu Arg Gly His Leu Val Arg Glu
      145                     150

```


<210> 384
 <211> 557
 <212> DNA
 <213> Homo sapiens

<400> 384
 ggatcctcta gagcgccgc ctactactac taaattcgcg gccgcgtcga cgaagaagag 60
 aaagatgtgt tttgttttgg actctctgtg gtcccttcca atgctgtggg tttccaacca 120
 ggggaagggt cccttttgca ttgccaaagt ccataaccat gagcactact ctaccatggg 180
 tctgcctcct ggccaagcag gctggtttgc aagaatgaaa tgaatgattc tacagctagg 240
 acttaacctt gaaatggaaa gtcttgcaat cccatttgca ggatccgtct gtgcacatgc 300
 ctctgtagag agcagcattc ccagggacct tggaaacagt tggcactgta aggtgcttgc 360
 tccccaaagac acatcctaaa aggtgttgta atggtgaaaa cgtcttcctt ctttattgcc 420
 ccttcttatt tatgtgaaca actgtttgtc tttttttgta tcttttttaa actgtaaaagt 480
 tcaattgtga aaatgaatat catgcaaata aattatgcga ttttttttcc aaagtaaaaa 540
 aaaaaaaaaa aaaaaaa 557

<210> 385
 <211> 337
 <212> DNA
 <213> Homo sapiens

<400> 385
 ttcccagggtg atgtgcgagg gaagacacat ttactatcct tgatggggct gattccttta 60
 gtttctctag cagcagatgg gttaggagga agtgacccaa gtggttgact cctatgtgca 120
 tctcaaagcc atctgctgtc ttcgagtacg gacacatcat cactcctgca ttgttgatca 180
 aaacgtggag gtgcttttcc tcagctaaga agcccttagc aaaagctcga atagacctag 240
 tatcagacag gtccagtttc cgcaccaaca cctgctggtt ccctgtcgtg gtctggatct 300
 ctttggccac caattcccc tttccacat cccggca 337

<210> 386
 <211> 300
 <212> DNA
 <213> Homo sapiens

<400> 386
 gggcccgccta ccggcccagg cccgcctcgc cgagtcctcc tccccgggtg cctgcccgca 60
 gccgcgtcgcg ccagaggggt gggcgcgggg ctgcctctac cggctggcgg ctgtaactca 120
 gcgaccttg ccgaaggct ctagcaagga cccaccgacc ccagccgcgg cggcggcggc 180
 gcggactttg ccggtgtgt ggggcggagc ggactgcgtg tccgcggacg ggcagcgaag 240
 atgttagcct tcgctgccag gaccgtggac cgatcccagg gctgtggtgt aacctcagcc 300

<210> 387
 <211> 537
 <212> DNA
 <213> Homo sapiens

<400> 387
 gggccgagtc gggcaccaag ggactctttg caggcttcct tcctcggatc atcaaggctg 60
 cccctcctcg tgccatcatg atcagcacct atgagttcgg caaaagcttc ttccagaggc 120
 tgaaccagga ccggttctg ggcggctgaa aggggcaagg aggcaaggac cccgtctctc 180
 ccacggatgg ggagagggca ggaggagacc cagccaagtg ccttttcctc agcactgagg 240
 gagggggcct gtttcccttc cctcccggcg acaagctcca gggcagggct gtccctctg 300

gcggcccagc acttcctcag acacaacttc ttctctgctgc tccagtcgtg gggatcatca 360
cttaccacc cccaagttc aagaccaa atccagctg ccccttcgt gtttccctgt 420
gtttgctgta gctgggcatg tctccaggaa ccaagaagcc ctcagcctgg tgtagtctcc 480
ctgacccttg ttaattcctt aagtctaaag atgatgaact tcaaaaaaaaa aaaaaaa 537

<210> 388

<211> 520

<212> DNA

<213> Homo sapiens

<400> 388

aggataat tttaaaccaat caaatgaaaa aaacaaacaa acaaaaaagg aaatgtcatg 60
tgagggtaaa ccagtttgca ttccccta atgtggaaaaa taagaggact actcagcact 120
gtttgaagat tgcctcttct acagcttctg agaattgtgt tatttcactt gccaaagtga 180
ggacccccct cccaacatgc cccagccccc ccctaagcat ggtcccttgt caccaggcaa 240
ccaggaaact gctacttggt gacctacca gagaccagga gggtttggt agctcacagg 300
acttccccca cccagaaaga ttagcatccc atactagact catactcaac tcaactaggc 360
tcatactcaa ttgatgggta ttagacaatt ccatttcttt ctgggtatta taaacagaaa 420
atctttcttc ttctcattac cagtaaaggc tcttggtatc tttctggttg aatgatttct 480
atgaacttgt cttattttta tgggtgggtt ttttctggt 520

<210> 389

<211> 365

<212> DNA

<213> Homo sapiens

<400> 389

cggtgcccc gtttgacaga aggaaaggcg gagcttattc aaagtctaga gggagtggag 60
gagttaaggc tggatttcag atctgctgg ttccagccgc agtggtgccct ctgctcccc 120
aacgacttcc caaataatct caccagcgc ttccagctca ggcgtcctag aagcgtcttg 180
aagcctatgg ccagctgtct ttgtgttccc tctccccgc ctgtcctcac agctgagact 240
cccaggaaac cttcagacta ccttctctg ccttcagcaa ggggcgttg ccacattctc 300
tgagggtcag tggagaagacc tagactccca ttgctagagg tagaaagggg aagggtgctg 360
gggag 365

<210> 390

<211> 221

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1) ... (221)

<223> n = A,T,C or G

<400> 390

tgcctctcca tcttgcccc gacttctctg tcaggaaagt ggggatggac cccatctgca 60
tacacggntt ctcatgggtg tggaaacatct ctgcttgccg ttcaggaag gcctctggct 120
gctctangag tctgancnga ntcgttgccc cantntgaca naaggaaagg cggagcttat 180
tcaaagtcta gagggagtgg aggagttaag gctggatttc a 221

<210> 391

<211> 325

<212> DNA

<213> Homo sapiens

<220>
 <221> misc_feature
 <222> (1)...(325)
 <223> n = A,T,C or G

<400> 391
 tggagcaggt cccgaggcct ccctagagcc tggggccgac tctgtgncga tgcangcttt 60
 ctctcgcgcc cagcctggag ctgtccttg catctacca caatcagncg aggcgagcag 120
 tagccagggc actgctgcca acagccagtc cnnataccat catgtnaccc ggtgngctct 180
 naantngat ntccanagcc ctacccatcn tagttctgct ctcccaccg ntaccagccc 240
 cactgcccag gaatcctaca gccagtaccc tgtcccgacg tctctaccta ccagtacgat 300
 gagacctccg gctactacta tgacc 325

<210> 392
 <211> 277
 <212> DNA
 <213> Homo sapiens

<220>
 <221> misc_feature
 <222> (1)...(277)
 <223> n = A,T,C or G

<400> 392
 atattgttta actccttcct ttatatcttt taacattttc atggngaaag gttcacatct 60
 agtctcactt nggcnagnn ctctacttg agtctcttcc ccggcctggn ccagtngnaa 120
 antaccanga accgncatgn cttaanaacn ncctgggttn tgggttnntc aatgactgca 180
 tgcagtgcac caccctgtcc actacgtgat gctgtaggat taaagtctca cagtgggcgg 240
 ctgaggatac agcgccgcgt cctgtgttgc tggggaa 277

<210> 393
 <211> 566
 <212> DNA
 <213> Homo sapiens

<400> 393
 actagtccag tgtggtggaa ttcgcggccg cgtcgacgga caggtcagct gtctggctca 60
 gtgatctaca ttctgaagtt gtctgaaaat gtcttcatga ttaaattcag cctaaacgtt 120
 ttgccgggaa cactgcagag acaatgctgt gagtttccaa ccttagccca tctgcgggca 180
 gagaaggtct agtttgtcca tcagcattat catgatatca ggactgggta cttgggttaag 240
 gaggggtcta ggagatctgt cccttttaga gacaccttac ttataatgaa gtatttggga 300
 ggggtgggttt caaaagtaga aatgtcctgt attccgatga tcatcctgta aacattttat 360
 catttattaa tcatccctgc ctgtgtctat tattatattc atatctctac gctggaaact 420
 ttctgcctca atgtttactg tgcctttgtt ttgtctagtt tgtgtgttg aaaaaaaaaa 480
 cattctctgc ctgagtttta atttttgtcc aaagttattt taatctatac aattaaaagc 540
 ttttgcctat caaaaaaaaa aaaaaa 566

<210> 394
 <211> 384
 <212> DNA
 <213> Homo sapiens

<220>
 <221> misc_feature

<222> (1) ... (384)

<223> n = A,T,C or G

<400> 394

```
gaacatacat gtcccggcac ctgagctgca gtctgacatc atcgccatca cgggcctcgc 60
tgcaaattng gaccgggcca aggctggact gctggagcgt gtgaaggagc tacaggccna 120
gcaggaggac cgggctttta ggagttttta gctgagtgtc actgtagacc ccaaatacca 180
tcccaagatt atcgggagaa agggggcagt aattacccaa atccggttgg agcatgacgt 240
gaacatccag tttcctgata aggacgatgg gaaccagccc caggaccaa ttaccatcac 300
agggtacgaa aagaacacag aagctgccag ggatgctata ctgagaattg tgggtgaact 360
tgagcagatg gtttctgagg acgt                                     384
```

<210> 395

<211> 399

<212> DNA

<213> Homo sapiens

<400> 395

```
ggcaaaactg tgtgacctca ataagacctc gcagatccaa ggtcaagtat cagaagtgc 60
tctgaccttg gactccaaga cctacatcaa cagcctggct atattagatg atgagccagt 120
tatcagaggt ttcattcatt cggaaattgt ggagtctaag gaaatcatgg cctctgaagt 180
attcacgtct ttccagtacc ctgagttctc tatagagttg cctaacacag gcagaattgg 240
ccagctactt gtctgcaatt gtatcttcaa gaataccctg gccatccctt tgactgacgt 300
caagttctct ttggaaagcc tgggcatctc ctactacag acctctgacc atgggacggg 360
gcagcctggg gagaccatcc aatcccaaat aaaatgcac                                     399
```

<210> 396

<211> 403

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1) ... (403)

<223> n = A,T,C or G

<400> 396

```
tggagttntc agtgcaaaca agccataaag cttcagtagc aaattactgt ctcacagaaa 60
gacattttca acttctgctc cagctgctga taaaacaaat catgtgttta gcttgactcc 120
agacaaggac aacctgttcc ttcataactc tctagagaaa aaaaggagtt gttagtagat 180
actaaaaaaaa gtggatgaat aatctggata ttttccctaa aaagattcct tgaaacacat 240
taggaaaatg gagggcctta tgatcagaat gctagaatta gtccattgtg ctgaagcagg 300
gtttagggga gggagtgagg gataaaagaa ggaaaaaaag aagagtgaga aaacctattt 360
atcaaagcag gtgctatcac tcaatgttag gccctgctct ttt                                     403
```

<210> 397

<211> 100

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1) ... (100)

<223> n = A,T,C or G

<400> 397

actagtnacag tgtgggtggaa ttcgcggccg cgtcgaccta naanccatct ctatagcaaa 60
 tccatccccg ctccctgggtg gtnacagaat gactgacaaa 100

<210> 398

<211> 278

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)...(278)

<223> n = A,T,C or G

<400> 398

gcggccgcgt cgacagcagt tccgccagcg ctgcgccctg ggtgggggatg tgctgcacgc 60
 ccacctggac atctggaagt cagcggcctg gatgaaagag cggacttcac ctggggcgat 120
 tcactactgt gcctcgacca gtgaggagag ctggaccgac agcgagggtg actcatcatg 180
 ctccgggag cccatccacc tgtggcagtt cctcaaggag ttgctactca agccccacag 240
 ctatggccgc ttcattangt ggctcaacaa ggagaagg 278

<210> 399

<211> 298

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)...(298)

<223> n = A,T,C or G

<400> 399

acggagggtg aggaagcgnc cctgggatcg anaggatggg tcctgncatt gaccncctcn 60
 ggggtgccng catggagcgc atgggcgcgg gcctgggcca cggcatggat cgctggggct 120
 ccgagatcga gcgcatgggc ctgggtcatgg accgcatggg ctccgtggag cgcattgggct 180
 ccggcattga gcgcatgggc ccgctgggccc tcgaccacat ggccctccanc attgancgca 240
 tgggccagac catggagcgc attggctctg gcgtggagcn catgggtgcc ggcatggg 298

<210> 400

<211> 548

<212> DNA

<213> Homo sapiens

<400> 400

acatcaacta cttcctcatt ttaaggatat gcagttccct tcatccccctt ttcctgcctt 60
 gtacatgtac atgtatgaaa tttccttctc ttaccgaact ctctccacac atcacaagggt 120
 caaagaacca cagccttaga agggtaagag ggcaccctat gaaatgaaat ggtgatttct 180
 tgagtctctt ttttccacgt ttaaggggccc atggcaggac ttagagttgc gagttaagac 240
 tgcagagggc tagagaatta tttcatacag gctttgaggc caccatgtc acttatccccg 300
 tataccctct caccatcccc ttgtctactc tgatgcccc aagatgcaac tgggcagcta 360
 gttggcccca taattctggg cctttgttgt ttgttttaat tacttgggca tcccaggaag 420
 ctttccagtg atctcctacc atgggcccc ctccctgggat caagccctc ccaggccctg 480
 tccccagccc ctccctgccc agcccacccg cttgccttgg tgctcagccc tcccattggg 540
 agcagggtt 548

<210> 401
<211> 355
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)...(355)
<223> n = A,T,C or G

<400> 401
actgtttcca tgttatgttt ctacacattg ctacctcagt gctcctggaa acttagcttt 60
tgatgtctcc aagtagtcca ctttcattta actctttgaa actgtatcat ctttgccaag 120
taagagtggg ggcctatttc agctgctttg acaaaatgac tggctcctga cttaacgttc 180
tataaatgaa tgtgctgaag caaagtgcc atggtggcgg cgaagaagan aaagatgtgt 240
tttgttttgg actctctgtg gtcccttcca atgctgnggg tttccaacca ggggaagggt 300
cccttttgca ttgccaagtg ccataaccat gagcactact ctaccatggn tctgc 355

<210> 402
<211> 407
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)...(407)
<223> n = A,T,C or G

<400> 402
atggggcaag ctggataaag aaccaagacc cactggagta tgcgtgtcttc aagaaaccca 60
tctcacatgc ggtggcatac ataggctcaa aataaaggaa tggagaaaaa tatttcaagc 120
aaatggaaaa cagaaaaaag cagggtgttg actcctactt tctgacaaaa cagactatgc 180
gaataaagat aaaaaagaga aggacattac aaaggtggtc ctgacctttg ataaatctca 240
ttgcttgata ccaacctggg ctgttttaat tgcccaaacc aaaaggataa tttgctgagg 300
ttgtggagct tctcccttgc agagagtccc tgatctccca aaatttggtt gagatgtaag 360
gntgattttg ctgacaactc cttttctgaa gttttactca tttccaa 407

<210> 403
<211> 303
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)...(303)
<223> n = A,T,C or G

<400> 403
cagtatttat agccnaactg aaaagctagt agcaggcaag tctcaaatcc aggcacccaaa 60
tcctaagcaa gagccatggc atggtgaaaa tgcaaaaggga gagtctggcc aatctacaaa 120
tagagaacaa gacctactca gtcattgaaca aaaaggcaga caccaacatg gatctcatgg 180
gggattggat attgtaatta tagagcagga agatgacagt gatcgtcatt tggcacaaca 240
tcttaacaac gaccgaaacc cattattttac ataaacctcc attcggtaac catgttgaaa 300
gga 303

<210> 404
<211> 225
<212> DNA
<213> Homo sapiens

<400> 404
aagtgttaact tttaaaaatt tagtggattt tgaaaattct tagaggaaaag taaaggaaaa 60
attgttaaatg cactcattta cctttacatg gtgaaagtgc tctcttgatc ctacaaacag 120
acattttcca ctctgttttc catagtgtt aagtgtatca gatgtgttg gcatgtgaat 180
ctccaagtgc ctgtgtaata aataaagat ctttatttca ttcac 225

<210> 405
<211> 334
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)...(334)
<223> n = A,T,C or G

<400> 405
gagctgttat actgtgagtt ctactaggaa atcatcaaat ctgaggggtg tctggaggac 60
ttcaatacac ctcccccat agtgaatcag cttccagggg gtccagtcct tctccttact 120
tcacccccat cccatgccaa aggaagaccc tccctccttg gtcacagcc ttctctaggc 180
ttcccagtgc tccaggaca gagtgggtta tgttttcagc tccatccttg ctgtgagtgt 240
ctggtgcggt tgtgcctcca gcttctgctc agtgcttcat ggacagtgtc cagcccatgt 300
cactctccac tctctcanng tggatccac ccct 334

<210> 406
<211> 216
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)...(216)
<223> n = A,T,C or G

<400> 406
tttcatacct aatgagggag ttganatnac atnnaaccag gaaatgcatg gatctcaang 60
gaaacaaaca cccaataaac tcggagtggc agactgacaa ctgtgagaca tgcacttgct 120
acnaaacaca aattttnatgt tgcacccttg tttctacacc tgtgggttat gacaaagaca 180
actgccaaag aatnttcaag aaggaggact gccant 216

<210> 407
<211> 413
<212> DNA
<213> Homo sapiens

<400> 407
gctgacttgc tagtatcatc tgcattcatt gaagcacaag aacttcatgc cttgactcat 60
gtaaatgcaa taggattaaa aaataaattt gatatcacat ggaaacagac aaaaaatatt 120
gtacaacatt gcacccagtgc tcagattcta cacctggcca ctgaggaagc aagagttaat 180
cccagaggtc tatgtcctaa tgtgttatgg caaatggatg tcatgcacgt accttcattt 240

```

ggaaaaattgt catttgtcca tgtgacagtt gatacttatt cacatttcat atgggcaacc 300
tgccagacag gagaaagtct tcccatgtta aaagacattt attatcttgt tttcctgtca 360
tgggagttcc agaaaaagtt aaaacagaca atgggccagg ttctgtagta aag          413

```

<210> 408

<211> 183

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)...(183)

<223> n = A,T,C or G

<400> 408

```

ggagctngcc ctcaattcct ccatntctat gttancatat ttaatgtctt ttgnnattaa 60
tncttaacta gttaatcctt aaagggctan ntaatcctta actagtccct ccattgtgag 120
cattatcctt ccagtattcn ccttctnttt tatttactcc ttcttggtta cccatgtact 180
ntt                                     183

```

<210> 409

<211> 250

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)...(250)

<223> n = A,T,C or G

<400> 409

```

cccacgcatg ataagctctt tatttctgta agtcctgcta ggaaatcatc aaatctgacg 60
gtgggttggg ggacctgaac aaacctcctg taattaatca gctttcagtt tctcccccta 120
gtccctcctt caacaacata ggaggatcct ccccttcttt ctgctcacgg ccttatctag 180
gcttcccagt gccccagga cagcgtgggc tatgtttaca gcgcntcctt gctggggggg 240
ggccntatgc                                     250

```

<210> 410

<211> 306

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)...(306)

<223> n = A,T,C or G

<400> 410

```

ggctggtttg caagaatgaa atgaatgatt ctacagctag gacttaacct tgaaatggaa 60
agtcttgcaa tcccatttgc aggatccgtc tgtgcacatg cctctgtaga gagcagcatt 120
cccagggacc ttggaaacag ttggcactgt aaggtgcttg ctccccaaaga cacatcctaa 180
aaggtgttgt aatggtgaaa accgcttcct tctttattgc cccttcttat ttatgtgaac 240
nactggttgg ctttttttgn atctttttta aactggaaag ttcaattgng aaaatgaata 300
tcntgc                                     306

```


<210> 411
 <211> 261
 <212> DNA
 <213> Homo sapiens

<220>
 <221> misc_feature
 <222> (1)...(261)
 <223> n = A,T,C or G

<400> 411
 agagatattn cttaggtnaa agttcataga gttcccatga actatatgac tggccacaca 60
 ggatcttttg tatttaagga ttctgagatt ttgcttgagc aggattagat aaggctgttc 120
 tttaaatgtc tgaaatggaa cagatttcaa aaaaaaaccc cacaatctag ggtgggaaca 180
 aggaaggaaa gatgtgaata ggctgatggg caaaaaacca atttaccat cagttccagc 240
 cttctctcaa ggngaggcaa a 261

<210> 412
 <211> 241
 <212> DNA
 <213> Homo sapiens

<220>
 <221> misc_feature
 <222> (1)...(241)
 <223> n = A,T,C or G

<400> 412
 gttcaatgtt acctgacatt tctacaacac cccactcacc gatgtattcg ttgccagtg 60
 ggaacatacc agcctgaatt tggaaaaaat aattgtgttt cttgccagg aaatactacg 120
 actgactttg atggctccac aaacataacc cagtgtaaaa acagaagatg tggaggggag 180
 ctgggagatt tcactgggta cattgaattc ccaaaactacc cangcaatta ccagccaac 240
 a 241

<210> 413
 <211> 231
 <212> DNA
 <213> Homo sapiens

<220>
 <221> misc_feature
 <222> (1)...(231)
 <223> n = A,T,C or G

<400> 413
 aactcttaca atccaagtga ctcactctgtg tgcttgaatc ctttccactg tctcatctcc 60
 ctcateccaag tttctagtag cttctctttg ttgtgaagga taatcaaact gaacaacaaa 120
 aagtttactc tcctcatttg gaacctaaaa actctcttct tcctgggtct gagggctcca 180
 agaatccttg aatcanttct cagatcattg gggacaccan atcaggaacc t 231

<210> 414
 <211> 234
 <212> DNA
 <213> Homo sapiens

<400> 414

```

actgtccatg aagcactgag cagaagctgg aggcacaacg caccagacac tcacagcaag 60
gatggagctg aaaacataac ccactctgtc ctggaggcac tgggaagcct agagaaggct 120
gtgagccaag gagggagggt cttcctttgg catgggatgg ggatgaagta aggagaggga 180
ctggaccccc tggaagctga ttcactatgg ggggaggtgt attgaagtcc tcca      234

```

<210> 415

<211> 217

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)...(217)

<223> n = A,T,C or G

<400> 415

```

gcataggatt aagactgagt atcttttcta cattctttta acttttctaag gggcacttct 60
caaaacacag accaggtagc aaatctccac tgctctaagg ntctcaccac cacttttctca 120
cacctagcaa tagtagaatt cagtcctact tctgaggcca gaagaatggt tcagaaaaat 180
antggattat aaaaaataac aattaagaaa aataatc      217

```

<210> 416

<211> 213

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)...(213)

<223> n = A,T,C or G

<400> 416

```

atgcatatnt aaagganact gcctcgcttt tagaagacat ctggnctgct ctctgcatga 60
ggcacagcag taaagctctt tgattcccag aatcaagaac tctccccttc agactattac 120
cgaatgcaag gtggttaatt gaaggccact aattgatgct caaatagaag gatattgact 180
atattggaac agatggagtc tctactacaa aag      213

```

<210> 417

<211> 303

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)...(303)

<223> n = A,T,C or G

<400> 417

```

nagtcttcag gcccatacagg gaagttcaca ctggagagaa gtcatacata tgtactgtat 60
gtgggaaagg ctttactctg agttcaaadc ttcaagccca tcagagagtc cacactggag 120
agaagccata caaatgcaat gagtgtggga agagcttcag gagggattcc cattatcaag 180
ttcatctagt ggtccacaca ggagagaaac cctataaatg tgagatatgt ggggaagggt 240
tcantcaaag ttcgtatctt caaatccatc ngaaggncca cagtatanan aaacctttta 300
agt      303

```

<210> 418
 <211> 328
 <212> DNA
 <213> Homo sapiens

<220>
 <221> misc_feature
 <222> (1)...(328)
 <223> n = A,T,C or G

<400> 418
 tttttggcgg tgggtggggca gggacggggac angagtctca ctctgttgcc caggctggag 60
 tgcacaggca tgatctcggc tcaactacaac ccctgcctcc catgtccaag cgattcttgt 120
 gcctcagcct tccctgtagc tagaattaca ggcacatgcc accacaccca gctagttttt 180
 gtattttttag tagagacagg gtttcacccat gttggccagg ctggtctcaa actcctnacc 240
 tcagnggtca ggctggtctc aaactcctga cctcaagtga tctgcccacc tcagcctccc 300
 aaagtgctan gattacaggc cgtgagcc 328

<210> 419
 <211> 389
 <212> DNA
 <213> Homo sapiens

<220>
 <221> misc_feature
 <222> (1)...(389)
 <223> n = A,T,C or G

<400> 419
 cctcctcaag acggcctgtg gtccgcctcc cggcaaccaa gaagcctgca gtgccatattg 60
 acccctgagc catggactgg agcctgaaag gcagcgtaca ccctgctcct gatcttgctg 120
 cttgttttct ctctgtggct ccattcatag cacagtgtgt gcaactgaggc ttgtgcaggc 180
 cgagcaaggc caagctggct caaagagcaa ccagtcaact ctgccacggg gtgccaggca 240
 ccggttctcc agccaccaac ctcaactcgt cccgcaaagt gcacatcagt tcttctaccc 300
 taaaggtagg accaaagggc atctgctttt ctgaagtctt ctgctctatc agccatcacg 360
 tggcagccac tcnggctgtg tcgacgcgg 389

<210> 420
 <211> 408
 <212> DNA
 <213> Homo sapiens

<400> 420
 gttcctccta actcctgcca gaaacagctc tcctcaacat gagagctgca cccctcctcc 60
 tggccagggc agcaagcctt agccttggtt tcttggttct gctttttttc tggctagacc 120
 gaagtgtact agccaaggag ttgaagtttg tgactttggt gtttcggcat ggagaccgaa 180
 gtccatttga cacccttccc actgacccca taaaggaatc ctcatggcca caaggatttg 240
 gccaaactcac ccagctgggc atggagcagc attatgaact tggagagtat ataagaaaga 300
 gatataaaaa attccttgaat gagtcctata aacatgaaca ggtttatatt cgaagcacag 360
 acgttgaccg gactttgatg aagtgtatg acaaacctgg caagcccg 408

<210> 421
 <211> 352
 <212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)...(352)

<223> n = A,T,C or G

<400> 421

```
gctcaaaaat ctttttactg atnggcatgg ctacacaatc attgactatt acggaggcca 60
gaggagaatg aggcctggcc tgggagccct gtgcctacta naagcacatt agattatcca 120
ttcactgaca gaacaggtct tttttgggtc cttcttctcc accacnatat acttgcagtc 180
ctccttcttg aagattcttt ggcagttgtc tttgtcataa cccacaggtg tagaaacaag 240
ggtgcaacat gaaatttctg tttcgtagca agtgcattgc tcacaagttg gcangtctgc 300
cactccgagt ttattgggtg tttgtttcct ttgagatcca tgcatttctt gg 352
```

<210> 422

<211> 337

<212> DNA

<213> Homo sapiens

<400> 422

```
atgccaccat gctggcaatg cagcgggcggt tcgaaggcct gcatatccag cccaagctgg 60
cgatgatcga cggcaaccgt tgcccgaagt tgccgatgcc agccgaagcg gtggtcaagg 120
gcatagcaa ggtgccggcg atcgcgggcg cgtcaatcct ggccaaggct agccgtgac 180
gtgaaatggc agctgtcgaa ttgatctacc cgggttatgg catcggcggg cataagggtc 240
atccgacacc ggtgcacctg gaagccttgc agcggctggg gccgacgccg attcaccgac 300
gcttcttccg ccggtacggc tggcctatga aaattat 337
```

<210> 423

<211> 310

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)...(310)

<223> n = A,T,C or G

<400> 423

```
gctcaaaaat ctttttactg atatggcatg gctacacaat cattgactat tagaggccag 60
aggagaatga ggcctggcct gggagccctg tgcctactan aagcncatta gattatccat 120
tactgacag aacaggtctt ttttgggtcc ttcttctcca ccacgatata cttgcagtc 180
tccttcttga agattctttg gcagttgtct ttgtcataac ccacaggtgt anaaacaagg 240
gtgcaacatg aaatttctgt ttcgtagcaa gtgcattgtc cacagttgtc aagtctgccc 300
tccgagttta 310
```

<210> 424

<211> 370

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)...(370)

<223> n = A,T,C or G

<400> 424
gctcaaaaat ctttttactg ataggcatgg ctacacaatc attgactatt agaggccaga 60
ggagaatgag gcctggcctg ggagccctgt gcctactaga agcacattag attatccatt 120
cactgacaga acaggctctt tttgggtcct tcttctccac cacgatatac ttgcagtcct 180
ccttcttgaa gattcttttg cagttgtctt tgtcataacc cacagggtgta gaaacatcct 240
ggttgaatct cctggaactc cctcattagg tatgaaatag catgatgcat tgcataaagt 300
cacgaagggtg gcaaagatca caacgctgcc cagganaaca ttcattgtga taagcaggac 360
tccgtcgacg 370

<210> 425
<211> 216
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)...(216)
<223> n = A,T,C or G

<400> 425
aattgctatn ntttattttg ccactcaaaa taattaccaa aaaaaaaaaa tnttaaatga 60
taacaacnca acatcaagg n aaananaaca ggaatggntg acntngcata aatnggccga 120
anattatcca ttatnttaag gggtgacttc aggntacagc acacagacaa acatgcccag 180
gaggntntca ggaccgctcg atgtnttntg aggagg 216

<210> 426
<211> 596
<212> DNA
<213> Homo sapiens

<400> 426
cttccagtga ggataaccct gttgccccgg gccgaggttc tccattaggc tctgattgat 60
tggcagtcag tgatggaagg gtgttctgat cattccgact gcccgaaggg tcgctggcca 120
gctctctgtt ttgctgagtt ggcagtagga cctaatttgt taattaagag tagatggtga 180
gctgtccttg tattttgatt aacctaattg ctttcccagc acgactcgga ttcagctgga 240
gacatcacgg caacttttaa tgaaatgatt tgaagggcca ttaagaggca cttcccgtta 300
ttaggcagtt catctgcact gataacttct tggcagctga gctggtcgga gctgtggccc 360
aaacgcacac ttggcttttg gttttgagat acaactctta atcttttagt catgcttgag 420
gggtggatggc cttttcagct ttaacccaat ttgcactgcc ttggaagtgt agccaggaga 480
atacactcat atactcgtgg gcttagaggc cacagcagat gtcattggtc tactgcctga 540
gtcccgtgg tcccatccca ggaccttcca tcggcgagta cctgggagcc cgtgct 596

<210> 427
<211> 107
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)...(107)
<223> n = A,T,C or G

<400> 427
gaagaattca agttagggtt attcaaaggg cttacngaga atcctanacc caggncccag 60

cccgggagca gccttanaga gctcctgttt gactgcccgg ctcagng

107

<210> 428

<211> 38

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)...(38)

<223> n = A,T,C or G

<400> 428

gaacttcena anaangactt tattcactat ttacatt

38

<210> 429

<211> 544

<212> DNA

<213> Homo sapiens

<400> 429

ctttgctgga cggaataaaa gtggacgcaa gcatgacctc ctgatgaggg cgctgcattt 60
 attgaagagc ggctgcagcc ctgcggttca gattaaaatc cgagaattgt atagacgccg 120
 atatccacga actcttgaag gactttctga tttatccaca atcaaactcat cggttttcag 180
 tttggatggg ggctcatcac ctgtagaacc tgacttggcc gtggctggaa tccactcgtt 240
 gccttccact tcagttacac ctcaactcacc atcctctcct gttgggttctg tgctgcttca 300
 agatactaag cccacatttg agatgcagca gccatctccc ccaattcctc ctgtccatcc 360
 tgatgtgcag ttaaaaaatc tgccctttta tgatgtcctt gatgttctca tcaagccac 420
 gagtttagtt caaagcagta ttcagcgatt tcaagagaag ttttttatatt ttgctttgac 480
 acctcaacaa gttagagaga tatgcatatc cagggatttt ttgccagggtg gtaggagaga 540
 ttat 544

<210> 430

<211> 507

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)...(507)

<223> n = A,T,C or G

<400> 430

cttatcncaa tggggctccc aaacttggct gtgcagtgga aactccgggg gaattttgaa 60
 gaacactgac acccatcttc caccgccaga ctctgattta attgggctgc agtgagaaca 120
 gagcatcaat ttaaaaagct gccacagaatg ttntcctggg cagcgttgtg atctttgccn 180
 ccttcgtgac tttatgcaat gcatcatgct atttcatacc taatgagggg gttccaggag 240
 attcaaccag gatgtttcta cncctgtggg ttatgacaaa gacaactgcc aaagaatntt 300
 caagaaggag gactgcaagt atatcgtggg ggagaagaag gacccaaaaa agacctgttc 360
 tgtcagtga tggataatct aatgtgcttc tagtaggcac agggctccca ggccaggcct 420
 cattctctc tggcctctaa tagtcaatga ttgtgtagcc atgcctatca gtaaaaagat 480
 ttttgagcaa aaaaaaaaaa aaaaaaa 507

<210> 431

<211> 392

<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)...(392)
<223> n = A,T,C or G

<400> 431
gaaaattcag aatggataaa aacaaatgaa gtacaaaata tttcagattt acatagcgat 60
aaacaagaaa gcacttatca ggaggactta caaatggaag tacactctan aaccatcatc 120
tatcatggct aaatgtgaga ttagcacagc tgtattattt gtacattgca aacacctaga 180
aagagatggg aaacaaaatc ccaggagttt tgtgtgtgga gtcttgggtt ttccaacaga 240
catcattcca gcattctgag attagggnga ttggggatca ttctggagtt ggaatgttca 300
acaaaagtga tgttgttagg taaaatgtac aacttctgga tctatgcaga cattgaaggt 360
gcaatgagtc tggcttttac tctgctgttt ct 392

<210> 432
<211> 387
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)...(387)
<223> n = A,T,C or G

<400> 432
ggtatccnta cataatcaaa tatagctgta gtacatgttt tcattggngt agattaccac 60
aaatgcaagg caacatgtgt agatctcttg tcttattctt ttgtctataa tactgtattg 120
ngtagtccaa gctctcggn a gtccagccac tngaaacat gctcccttta gattaacctc 180
gtggacnctn ttgttgnatt gtctgaactg tagngccctg tatttttgctt ctgtctgnga 240
attctgttgc ttctggggca tttccttgng atgcagagga ccaccacaca gatgacagca 300
atctgaattg ntccaatcac agctgcgatt aagacatact gaaatcgtac aggaccggga 360
acaacgtata gaacactgga gtccttt 387

<210> 433
<211> 281
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)...(281)
<223> n = A,T,C or G

<400> 433
ttcaactagc anagaanact gcttcagggg gtgtaaaatg aaaggcttcc acgcagttat 60
ctgattaaag aacactaaga gagggacaag gctagaagcc gcaggatgtc tacactatag 120
caggcnctat ttgggttggc tggaggagct gtggaaaaca tggagagatt ggcgctggag 180
atcgccgtgg ctattcctcn ttgntattac accagngagg ntctctgtnt gccactgggt 240
tnnaaaaccg ntatacaata atgatagaat aggacacaca t 281

<210> 434
<211> 484

<212> DNA

<213> Homo sapiens

<400> 434

```
ttttaaaata agcatttagt gctcagtccc tactgagtac tctttctctc ccctcctctg 60
aatttaattc tttcaacttg caatttgcaa ggattacaca tttcactgtg atgtatatg 120
tgttgcaaaa aaaaaaaagt gtctttgttt aaaattactt ggtttgtaga tccatcttgc 180
tttttcccca ttggaactag tcattaaccc atctctgaac tggtagaaaa acatctgaag 240
agctagtcta tcagcatctg acaggtgaat tggatgggtc tcagaaccat ttcacccaga 300
cagcctgttt ctatcctgtt taataaatta gtttgggttc tctacatgca taacaaaccc 360
tgctccaatc tgtcacataa aagtctgtga cttgaagttt agtcagcacc cccaccaaac 420
tttatttttc tatgtgtttt ttgcaacata tgagtgtttt gaaaataaag taccatgtc 480
ttta
```

484

<210> 435

<211> 424

<212> DNA

<213> Homo sapiens

<400> 435

```
gcgcccgtca gagcaggtca ctttctgctt tccacgtcct ccttcaagga agccccatgt 60
gggtagcttt caatatcgca ggttcttact cctctgcctc tataagctca aaccacccaa 120
cgatcgggca agtaaaccct ctccctcgcc gacttcggaa ctggcgagag ttcagcgag 180
atgggcctgt ggggaggggg caagatagat gagggggagc ggcattgtgc ggggtgacct 240
cttgagagaga ggaaaaaggc cacaagaggg gctgccaccg ccactaacgg agatggccct 300
ggtagagacc tttgggggtc tggaaacctt ggactcccca tgctctaact cccacactct 360
gctatcagaa acttaaaactt gaggattttc tctgtttttc actcgcaata aattcagagc 420
aaac
```

424

<210> 436

<211> 667

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1) ... (667)

<223> n = A,T,C or G

<400> 436

```
accttgggaa nactctcaca atataaaggg tcgtagactt tactccaaat tccaaaaagg 60
tcctggccat gtaatcctga aagttttccc aaggtagcta taaaatcctt ataaggggtg 120
agcctcttct ggaattcctc tgatttcaaa gtctcactct caagttcttg aaaacgaggg 180
cagttcctga aaggcaggta tagcaactga tcttcagaaa gaggaactgt gtgcaccggg 240
atgggctgcc agagtaggat aggattccag atgctgacac ctctgggggg aaacaggggt 300
gccaggtttg tcatagcact catcaaagtc cggtcacagt ctgtgcttcg aatataaacc 360
tgttcatgtt tataggactc attcaagaat tttctatatc tctttcttat atactctcca 420
agttcataat gctgctccat gcccagctgg gtgagttggc caaatccttg tggccatgag 480
gattccttta tggggtcagt gggaaagggt tcaatgggac ttcgggtctc atgccgaaac 540
accaaagtca caaacttcaa ctcttggtc agtacacttc ggtctagcca gaaaaaaagc 600
agaaacaaga agccaaggct aaggcttgct gccctgccag gaggaggggt gcagctctca 660
tgttgag
```

667

<210> 437

<211> 693

<212> DNA

<213> Homo sapiens

<400> 437

```

ctacgtctca accctcattt ttaggtaagg aatcttaagt ccaaagatat taagtgactc 60
acacagccag gtaaggaaaag ctggattggc acactaggac tctaccatac cgggttttgt 120
taaagctcag gttaggaggc tgataagctt ggaaggaaact tcagacagct ttttcagatc 180
ataaaagata attcttagcc catgttcttc tccagagcag acctgaaatg acagcacagc 240
aggtactcct ctattttcac cctctttgct tctactctct ggcagtcaga cctgtgggag 300
gccatgggag aaagcagctc tctggatggt tgtacagatc atggactatt ctctgtggac 360
catttctcca ggttacccta ggtgtcacta ttgggggggac agccagcatc tttagctttc 420
atltgagttt ctgtctgtct tcagtagagg aaacttttgc tcttcacact tcacatctga 480
acacctaact gctgttgctc ctgaggtggt gaaagacaga tatagagctt acagtattta 540
tcctatttct aggcactgag ggctgtgggg taccttgtgg tgccaaaaca gatcctgttt 600
taaggacatg ttgcttcaga gatgtctgta actatctggg ggctctgttg gctctttacc 660
ctgcatcatg tgctctcttg gctgaaaatg acc                                     693

```

<210> 438

<211> 360

<212> DNA

<213> Homo sapiens

<400> 438

```

ctgcttatca caatgaatgt tctcctgggc agcgtttgtga tctttgccac cttegtgact 60
ttatgcaatg catcatgcta tttcatacct aatgagggag ttccaggaga ttcaaccagg 120
atgtttctac acctgtgggt tatgacaaag acaactgcca aagaatcttc aagaaggagg 180
actgcaagta tatctggtgg agaagaagga cccaaaaaag acctgttctg tcagtgaatg 240
gataatctaa tgtgcttcta gtaggcacag ggctcccagg ccaggcctca ttctcctctg 300
gcctctaata gtcaataatt gtgtagccat gcctatcagt aaaaagattt ttgagcaaac 360

```

<210> 439

<211> 431

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)...(431)

<223> n = A,T,C or G

<400> 439

```

gttcctnnta actcctgcca gaaacagctc tcctcaacat gagagctgca cccctcctcc 60
tggccagggc agcaagcctt agccttggct tcttgtttct gctttttttc tggctagacc 120
gaagtgtact agccaaggag ttgaagtttg tgactttggt gtttcggcat ggagaccgaa 180
gtcccattga cacctttccc actgaccca taaaggaatc ctcatggcca caaggatttg 240
gccaaactcac ccagctgggc atggagcagc attatgaact tggagagtat ataagaaaga 300
gatatagaaa attcttgaat gagtcctata aacatgaaca ggtttatatt cgaagcacag 360
acgttgaccg gactttgatg agtgctatga caaacctggc agcccgtcga cgcggccgcg 420
aatttagtag t                                     431

```

<210> 440

<211> 523

<212> DNA

<213> Homo sapiens

<400> 440

```
agagataaaag cttaggtcaa agttcataga gttcccatga actatatgac tggccacaca 60
ggatcttttg tatttaagga ttctgagatt ttgcttgagc aggattagat aaggctgttc 120
tttaaagtgc tgaaatggaa cagatttcaa aaaaaaacc cacaatctag ggtgggaaca 180
aggaaggaaa gatgtgaata ggctgatggg caaaaaacca atttacccat cagttccagc 240
cttctctcaa ggagaggcaa agaaaggaga tacagtggag acatctggaa agttttctcc 300
actggaaaac tgctactatc tgtttttata tttctgttaa aatatatgag gctacagaac 360
taaaaattaa aacctctttg tgtcccttgg tcctggaaca tttatgttcc ttttaaagaa 420
acaaaaatca aactttacag aaagatttga tgtatgtaat acatatagca gctcttgaag 480
tatatatatc atagcaaata agtcactga tgagaacaag cta 523
```

<210> 441

<211> 430

<212> DNA

<213> Homo sapiens

<400> 441

```
gttcctccta actcctgcc aaacagctc tcctcaacat gagagctgca cccctcctcc 60
tggccagggc agcaagcctt agccttggct tcttgtttct gctttttttc tggctagacc 120
gaagtgtact agccaaggag ttgaagtttg tgactttggg gtttcggcat ggagaccgaa 180
gtccatttga cacctttccc actgacccca taaaggaatc ctcattggcca caaggatttg 240
gccaactcac ccagctgggc atggagcagc attatgaact tggagagtat ataagaaaga 300
gatatagaaa attcttgaat gagtcctata aacatgaaca ggtttatatt cgaagcacag 360
acgttgaccg gactttgatg agtgctatga caaacctggc agcccgctga cgcggccgcg 420
aatttagtag 430
```

<210> 442

<211> 362

<212> DNA

<213> Homo sapiens

<400> 442

```
ctaaggaatt agtagtggtc ccatcacttg tttggagtgt gctattctaa aagattttga 60
tttcttgtaa tgacaattat attttaactt tgggtgggga aagagttata ggaccacagt 120
cttcacttct gatacttgta aattaatctt ttattgcact tgttttgacc attaagctat 180
atgtttagaa atgggtcatt tacggaaaaa ttagaaaaat tctgataata gtgcagaata 240
aatgaattaa tgttttactt aatttatatt gaactgtcaa tgacaaataa aaattctttt 300
tgattatttt ttgttttcat ttaccagaat aaaaactaag aattaaaagt ttgattacag 360
tc 362
```

<210> 443

<211> 624

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)...(624)

<223> n = A,T,C or G

<400> 443

```
tttttttttt gcaacacaat atacatcaca gtgaaatgtg taatccttgc aaattgcaag 60
ttgaaagaat taaattcaga ggaggggaga gaaagagtac tcagtaggga ctgagcacta 120
aatgcttatt ttaaaagaaa tgtaaagagc agaaagcaat tcaggctacc ctgccttttg 180
tgctggctag tactccggtc ggtgtcagca gcacgtggca ttgaacattg caatgtggag 240
```

```

cccaaaccac agaaaatggg gtgaaattgg ccaactttct attaacttgg cttcctgttt 300
tataaaatat tgtgaataat atcacctact tcaaagggca gttatgaggc ttaaataaac 360
taacgcctac aaaacactta aacatagata acataggtgc aagtactatg tatctggtac 420
atggtaaaca tccttattat taaagtcaac gctaaaatga atgtgtgtgc atatgctaata 480
agtacagaga gagggcactt aaaccaacta agggcctgga gggaagggtt cctggaaaga 540
ngatgcttgt gctgggtcca aatcttggtc tactatgacc ttggccaaat tatttaaact 600
ttgtccctat ctgctaaaca gatac 624

```

<210> 444

<211> 425

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)...(425)

<223> n = A,T,C or G

<400> 444

```

gcacatcatt nntcttgcatt tctttgagaa taagaagatc agtaaatagt tcagaagtgg 60
gaagctttgt ccaggcctgt gtgtgaaccc aatgttttgc ttagaaatag aacaagtaag 120
ttcattgcta tagcataaca caaaatttgc ataagtggtg gtcagcaaat ccttgaatgc 180
tgcttaaatgt gagaggttgg taaaatcctt tgtgcaacac tctaactccc tgaatgtttt 240
gctgtgctgg gacctgtgca tgccagacaa ggccaagctg gctgaaagag caaccagcca 300
cctctgcaat ctgccacctc ctgctggcag gatttgtttt tgcatactgt gaagagccaa 360
ggaggcacca gggcataagt gagtagactt atggtcgacg cggccgcgaa tttagtagta 420
gtaga 425

```

<210> 445

<211> 414

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)...(414)

<223> n = A,T,C or G

<400> 445

```

catgtttatg nttttggatt actttgggca cctagtgttt ctaaatcgct tatcattctt 60
ttctgttttt caaaagcaga gatggccaga gtctcaacaa actgtatctt caagtctttg 120
tgaaattctt tgcattgtgc agattattgg atgtagtctt ctttaactag catataaatc 180
tggtgtgttt cagataaatg aacagcaaaa tgtggtggaa ttaccatttg gaacattgtg 240
aatgaaaaat tgtgtctcta gattatgtaa caaataacta tttcctaacc attgatcttt 300
ggatttttat aatcctactc acaaatgact aggttctctc tcttgtattt tgaagcagtg 360
tgggtgctgg attgataaaa aaaaaaaaag tcgacgcggc cgcaattta gtag 414

```

<210> 446

<211> 631

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)...(631)

<223> n = A,T,C or G

<400> 446

```
acaaattaga anaaagtgcc agagaacacc acataccttg tccggaacat tacaatggct 60
tctgcatgca tgggaagtgt gagcattcta tcaatatgca ggagccatct tgcaggtgtg 120
atgctgggta tactggacaa cactgtgaaa aaaaggacta cagtgttcta tacgttggtc 180
ccggtcctgt acgatttcag tatgtcttaa tgcagctgt gattggaaca attcagattg 240
ctgtcatctg tgtggtgggc ctctgcatca caagggccaa actttaggta atagcattgg 300
actgagattt gtaaactttc caaccttcca ggaaatgccc cagaagcaac agaattcaca 360
gacagaagca aaatacaggg cactacagtt cagacaatac aacaagagcg tccacgaggt 420
taatctaaag ggagcatgtt tcacagtggc tggactaccg agagcttgga ctacacaata 480
cagtattata gacaaaagaa taagacaaga gatctacaca tggtgccttg catttggtgt 540
aatctacacc aatgaaaaca tgtactacag ctatatttga ttatgtatgg atatatttga 600
aatagtatac attgtcttga tgttttttct g                                     631
```

<210> 447

<211> 585

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)...(585)

<223> n = A,T,C or G

<400> 447

```
ccttgggaaa antntcacia tataaagggt cgtagacttt actccaaatt ccaaaaagggt 60
cctggccatg taatcctgaa agttttccca aggtagctat aaaatcctta taagggtgca 120
gcctcttctg gaattcctct gatttcaaag tctcactctc aagttcttga aaacgagggc 180
agttcctgaa aggcaggtat agcaactgat cttcagaaag aggaactgtg tgcaccggga 240
tgggctgcca gagtaggata ggattccaga tgcctgacacc ttctggggga aacagggctg 300
ccagggttgt catagcactc atcaaagtcg ggtcaacgtc tgtgcttcga atataaacct 360
gttcatgttt ataggactca ttcaagaatt ttctatatct ctttcttata tactctccaa 420
gttcataatg ctgctccatg cccagctggg tgagttggcc aaatccttgt ggccatgagg 480
attcctttat ggggtcagtg ggaaagggtg caatgggact tcggtctcca tgccgaaaca 540
ccaaagtcac aaacttcaac tccttggtca gtacacttcg gtcta                                     585
```

<210> 448

<211> 93

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)...(93)

<223> n = A,T,C or G

<400> 448

```
tgctcgtggg tcattctgan ncccgaactg accntgccag ccctgccgan gggccnccat 60
ggctccctag tgccctggag agganggggc tag                                     93
```

<210> 449

<211> 706

<212> DNA

<213> Homo sapiens

<220>
 <221> misc_feature
 <222> (1)...(706)
 <223> n = A,T,C or G

<400> 449
 ccaagttcat gctntgtgct ggacgctgga caggggggcaa aagcnnttgc tcgtgggtca 60
 ttctgancac cgaactgacc atgccagccc tgccgatggt cctccatggc tccctagtgc 120
 cctggagagg aggtgtctag tcagagagta gtcctggaag gtggcctctg ngaggagcca 180
 cggggacagc atcctgcaga tggtcgggcg cgtcccattc gccattcagg ctgcgcaact 240
 gttgggaagg gcgatcggtg cgggcctctt cgctattacg ccagctggcg aaagggggat 300
 gtgctgcaag gcgattgaat tgggtaacgc caggggtttc ccagtcncga cgttgtaaaa 360
 cgacggccag tgaattgaat ttaggtgacn ctatagaaga gctatgacgt cgcatgcacg 420
 cgtacgtaag cttggatcct ctagagcggc cgcctactac tactaaattc gcggccgcgt 480
 cgacgtggga tccnactga gagagtggag agtgacatgt gctggacnct gtccatgaag 540
 cactgagcag aagctggagg cacaacgcnc cagacactca cagctactca ggaggctgag 600
 aacaggttga acctgggagg tggaggttgc aatgagctga gatcaggccn ctgcncccca 660
 gcatggatga cagagtgaag ctccatctta aaaaaaaaaa aaaaaa 706

<210> 450
 <211> 493
 <212> DNA
 <213> Homo sapiens

<400> 450
 gagacggagt gtcactctgt tgcccaggct ggagtgcagc aagacactgt ctaagaaaaa 60
 acagttttta aaggtaaaaa aacataaaaa gaaatatcct atagtggaaa taagagagtc 120
 aaatgaggct gagaacttta caaagggatc ttacagacat gtcgccaata tcaactgcatg 180
 agcctaagta taagaacaac ctttggggag aaaccatcat ttgacagtga ggtacaattc 240
 caagtcagggt agtgaaatgg gtggaattaa actcaaatta atcctgccag ctgaaacgca 300
 agagacactg tcagagagtt aaaaagttag ttctatccat gaggtgattc cacagtcttc 360
 tcaagtcaac acatctgtga actcacagac caagttctta aaccactgtt caaactctgc 420
 tacacatcag aatcacctgg agagctttac aaactcccat tgccgagggt cgacgcggcc 480
 gcgaatttag tag 493

<210> 451
 <211> 501
 <212> DNA
 <213> Homo sapiens

<220>
 <221> misc_feature
 <222> (1)...(501)
 <223> n = A,T,C or G

<400> 451
 gggcgcgctc cattcgccat tcaggctgcg caactgttgg gaagggcgat cgggtcgggc 60
 ctcttcgcta ttacgccagc tggcgaaagg gggatgtgct gcaaggcgat taagttgggt 120
 aacgccaggg ttttccagc cncgacgttg taaaacgacg gccagtgaat tgaatttagg 180
 tgacnctata gaagagctat gacgtcgcat gcacgcgtac gtaagcttgg atcctctaga 240
 gcggccgcct actactacta aattcgcggc cgcgtcgacg tgggatccnc actgagagag 300
 tggagagtga catgtgctgg acnctgtcca tgaagcactg agcagaagct ggaggcacia 360
 cgcncagac actcacagct actcaggagg ctgagaacag gttgaacctg ggaggtggag 420
 gttgcaatga gctgagatca ggccnctgcn ccccgagcatg gatgacagag tgaaactcca 480

tctttaaaaaa aaaaaaaaaa a

501

<210> 452

<211> 51

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)...(51)

<223> n = A,T,C or G

<400> 452

agacggtttc accnttacaa cnccttttag gatgggnntt ggggagcaag c

51

<210> 453

<211> 317

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)...(317)

<223> n = A,T,C or G

<400> 453

tacatcttgc tttttcccca ttggaactag tcattaaccc atctctgaac tggtagaaaa 60
acatctgaag agctagtcta tcagcatctg gcaagtgaat tggatggttc tcagaaccat 120
ttcacccana cagcctgttt ctatcctgtt taataaatta gtttgggttc tctacatgca 180
taacaaaccc tgctccaatc tgtcacataa aagtctgtga cttgaagttt antcagcacc 240
cccaccaaac tttatttttc tatgtgtttt ttgcaacata tgagtgtttt gaaaataagg 300
taccatgtc tttatta 317

<210> 454

<211> 231

<212> DNA

<213> Homo sapiens

<400> 454

ttcgaggtag aatcaactct cagagtgtag tttccttcta tagatgagtc agcattaata 60
taagccacgc cagctctttg aaggagtctt gaattctcct ctgctcactc agtagaacca 120
agaagaccaa attcttctgc atcccagctt gcaaacaaaa ttgttcttct aggtctccac 180
ccttctttt tcagtgttcc aaagctctc acaatttcat gaacaacagc t 231

<210> 455

<211> 231

<212> DNA

<213> Homo sapiens

<400> 455

taccaaagag ggcataataa tcagtctcac agtaggggttc accatcctcc aagtgaaaaa 60
cattgttccg aatgggcttt ccacaggcta cacacacaaa acaggaaaca tgccaagttt 120
gtttcaacgc attgatgact tctccaagga tcttctttg gcatcgacca cattcagggg 180
caaagaattt ctcatagcac agctcacaat acagggtctc tttctcctct a 231

<210> 456
<211> 231
<212> DNA
<213> Homo sapiens

<400> 456
ttggcaggta cccttacaaa gaagacacca taccttatgc gttattaggt ggaataatca 60
ttccattcag tattatcggt attattcttg gagaaaccct gtctgtttac tgtaaccttt 120
tgcactcaaa ttcctttatc aggaataact acatagccac tattacaaa gccattggaa 180
cctttttatt tgggtgcagct gctagtcagt ccctgactga cattgccaag t 231

<210> 457
<211> 231
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)...(231)
<223> n = A,T,C or G

<400> 457
cgaggtagccc aggggtctga aaatctctnn tttantagtc gatagcaaaa ttgttcatca 60
gcattcctta atatgatctt gctataatta gatttttctc cattagagtt catacagttt 120
tatttgattt tattagcaat ctctttcaga agacccttga gatcattaag ctttgtatcc 180
agttgtctaa atcgatgcct catttccctc gaggtgtcgc tggcttttgc g 231

<210> 458
<211> 231
<212> DNA
<213> Homo sapiens

<400> 458
aggtctgggt cccccactt ccactcccct ctactctctc taggactggg ctgggccaag 60
agaagagggg tggttaggga agccgttgag acctgaagcc ccaccctcta ccttccttca 120
acaccctaac cttgggtaac agcatttgga attatcattt gggatgagta gaatttccaa 180
ggtcctgggt taggcatttt ggggggccag accccaggag aagaagattc t 231

<210> 459
<211> 231
<212> DNA
<213> Homo sapiens

<400> 459
ggtaccgagg ctcgctgaca cagagaaacc ccaacgcgag gaaaggaatg gccagccaca 60
ccttcgcgaa acctgtggtg gccaccagt cctaacggga caggacagag agacagagca 120
gccctgcact gttttccctc caccacagcc atcctgtccc tcattggctc tgtgctttcc 180
actatacaca gtcaccgtcc caatgagaaa caagaaggag caccctccac a 231

<210> 460
<211> 231
<212> DNA
<213> Homo sapiens

<400> 460

```
gcaggtataa catgctgcaa caacagatgt gactaggaac ggccggtgac atggggaggg 60
cctatcaccc tattcttggg ggctgcttct tcacagtgat catgaagcct agcagcaaat 120
cccacctccc cacacgcaca cggccagcct ggagcccaca gaagggtcct cctgcagcca 180
gtggagcttg gtccagcctc cagtccaccc ctaccaggct taaggataga a 231
```

<210> 461

<211> 231

<212> DNA

<213> Homo sapiens

<400> 461

```
cgaggtttga gaagctctaa tgtgcagggg agccgagaag caggcggcct agggaggggtc 60
gcgtgtgctc cagaagagtg tgtgcatgcc agaggggaaa caggcgcctg tgtgtcctgg 120
gtggggttca gtgaggagtg ggaaattggt tcagcagaac caagccgttg ggtgaataag 180
agggggattc catggcactg atagagccct atagtctcag agctgggaat t 231
```

<210> 462

<211> 231

<212> DNA

<213> Homo sapiens

<400> 462

```
aggtaccctc attgtagcca tgggaaaatt gatgttcagt ggggatcagt gaattaaatg 60
gggtcatgca agtataaaaa ttaaaaaaaa aagacttcat gcccaatctc atatgatgtg 120
gaagaactgt tagagagacc aacagggtag tgggttagag atttcagag tcttacattt 180
tctagaggag gtatttaatt tcttctcact catccagtgt tgtatttagg a 231
```

<210> 463

<211> 231

<212> DNA

<213> Homo sapiens

<400> 463

```
tactccagcc tgggtgacaga gcgagaccct atcaccgccc cccacccccc caaaaaaaaa 60
actgagtaga caggtgtcct cttggcatgg taagtcttaa gtcccctccc agatctgtga 120
catttgacag gtgtcttttc ctctggacct cggtgtcccc atctgagtga gaaaaggcag 180
tggggagggtg gatcttccag tcgaagcggt atagaagccc gtgtgaaaag c 231
```

<210> 464

<211> 231

<212> DNA

<213> Homo sapiens

<400> 464

```
gtactctaag attttatcta agttgccttt tctgggtggg aaagttaaac cttagtgact 60
aaggacatca catatgaaga atgtttaagt tggagggtggc aacgtgaatt gcaaacaggg 120
cctgcttcag tgactgtgtg cctgtagtcc cagctactcg ggagtctgtg tgaggccagg 180
ggtgccagcg caccagctag atgctctgta acttctaggg cccattttcc c 231
```

<210> 465

<211> 231

<212> DNA

<213> Homo sapiens

<400> 465


```

catgttggtg tagctgtggt aatgctggct gcatctcaga caggggttaac ttcagctcct 60
gtggcaaatt agcaacaaat tctgacatca tatttatggt ttctgtatct ttgttgatga 120
aggatggcac aattttttgct tgtgttcata atatactcag attagttcag ctccatcaga 180
taaactggag acatgcagga cattagggta gtgttgtagc tctggtaatg a 231

```

<210> 466

<211> 231

<212> DNA

<213> Homo sapiens

<400> 466

```

caggtacctc ttccattgg atactgtgct agcaagcatg ctctccgggg tttttttaat 60
ggccttcgaa cagaacttgc cacataccca ggtataatag tttctaacat ttgccagga 120
cctgtgcaat caaatattgt ggagaattcc ctagctggag aagtcacaaa gactataggc 180
aataatggag accagtccca caagatgaca accagtcggt gtgtgcggt g 231

```

<210> 467

<211> 311

<212> DNA

<213> Homo sapiens

<400> 467

```

gtacaccctg gcacagtcca atctgaactg gttcggcact catctttcat gagatggatg 60
tggcggcttt tctccttttt catcaagact cctcagcagg gagccagac cagcctgcac 120
tgtgccttaa cagaaggctt tgagattcta agtgggaatc atttcagtga ctgtcatgtg 180
gcatgggtct ctgcccaagc tcgtaatgag actatagcaa ggcggtgtg ggacgtcagt 240
tgtgacctgc tgggcctccc aatagactaa caggcagtgc cagttggacc caagagaaga 300
ctgcagcaga c 311

```

<210> 468

<211> 3112

<212> DNA

<213> Homo sapiens

<400> 468

```

cattgtgttg ggagaaaaac agagggggaga tttgtgtggc tgcagccgag ggagaccagg 60
aagatctgca tgggtgggaag gacctgatga tacagagttt gataggagac aattaaaggc 120
tggaaggcac tggatgcctg atgatgaagt ggactttcaa actggggcac tactgaaacg 180
atgggatggc cagagacaca ggagatgagt tggagcaagc tcaataacaa agtgggttcaa 240
cgaggacttg gaattgcatg gagctggagc tgaagtttag cccaattgtt tactagttag 300
gtgaatgtgg atgattggat gatcatttct catctctgag cctcaggttc cccatccata 360
aaatgggata cacagtatga tctataaagt gggatatagt atgatctact tcaactgggtt 420
atgtgaagga tgaattgaga taatttattt cagggtgccta gaacaatgcc cagattagta 480
catttggttg aactgagaaa tggcataaca ccaaatttaa tatatgtcag atgttactat 540
gattatcatt caatctcata gttttgtcat ggccaattt atcctcactt gtgcctcaac 600
aaattgaact gttaacaaag gaatctctgg tcctgggtaa tggctgagca ccaactgagca 660
tttccattcc agttggcttc ttgggtttgc tagctgcac actagtcac ttaaataaat 720
gaagttttta catttctcca gtgatttttt tatctcacct ttgaagatac tatgttatgt 780
gattaaataa agaacttgag aagaacagggt ttcattaaac ataaaatcaa tgtagacgca 840
aattttcttg atgggcaata cttatgttca caggaaatgc tttaaaatat gcagaagata 900
attaaatggc aatggacaaa gtgaaaaact tagacttttt tttttttttt ggaagtatct 960
ggatgttcct taagcactta aaggagaaact gaataatagc agtgagttcc acataatcca 1020
acctgtgaga ttaaggctct ttgtggggaa ggacaaagat ctgtaaattt acagtttctt 1080
tccaaagcca acgtcgaatt ttgaaacata tcaaagctct tcttcaagac aaataatcta 1140
tagtacatct ttcttatggg atgcacttat gaaaaatggt ggctgtcaac atctagtcac 1200

```

tttagctctc aaaatgggtc attttaagag aaagtttttag aatctcatat ttattcctgt 1260
ggaaggacag cattgtggct tggactttat aaggctcttta ttcaactaaa taggtgagaa 1320
ataagaaagg ctgctgactt taccatctga ggccacacat ctgctgaaat ggagataatt 1380
aacatcacta gaaacagcaa gatgacaata taatgtctaa gtagtgacat gtttttgac 1440
atttccagcc cctttaaata tccacacaca caggaagcac aaaaggaagc acagagatcc 1500
ctgggagaaa tggccggccg ccactctggg tcatcgatga gcctcgccct gtgcctggtc 1560
ccgcttgtga ggggaaggaca ttagaaaatg aattgatgtg ttccttaaag gatgggcagg 1620
aaaacagatc ctggttgtgga tattttatttg aacgggatta cagatttgaa atgaagtcac 1680
aaagtgagca ttaccaatga gaggaaaaca gacgagaaaa tcttgatggc ttcacaagac 1740
atgcaacaaa aaaaatggaa tactgtgatg acatgaggca gccaaagctgg ggaggagata 1800
accacggggc agaggggtcag gattctggcc ctgctgccta aactgtgcgt tcataaccaa 1860
atcatttcat atttctaacc ctcaaaacaa agctgttgta atatctgatc tctacggttc 1920
cttctggggc caacattctc catatatcca gccacactca tttttaatat ttagttccca 1980
gatctgtact gtgacctttc tacactgtag aataacatta ctcatcttct tcaaagaccc 2040
ttcgtgttgc tgcctaatat gtagctgact gtttttctta aggagtgttc tggccagggg 2100
gatctgtgaa caggctggga agcatctcaa gatctttcca ggggtatact tactagcaca 2160
cagcatgatc attacggagt gaattatcta atcaacatca tctcagtggt ctttgcccat 2220
actgaaattc atttccact tttgtgcccc ttctcaagac ctcaaaatgt cattccatta 2280
atatcacagg attaactttt ttttttaacc tggagaagaa caatgttaca tgcagctatg 2340
ggaatttaac tacatatattt gttttccagt gcaaagatga ctaagtcctt taccctccc 2400
ctttgtttga ttttttttcc agtataaagt taaaatgctt agccttgtac tgaggctgta 2460
tacagccaca gcctctcccc atccctccag ccttatctgt catcaccatc aaccctccc 2520
atgcacctaa acaaaatcta acttgtaatt ccttgaacat gtcaggcata cattattcct 2580
tctgcttagc aagctcttcc ttgtctctta aatctagaat gatgtaaagt tttgaataag 2640
ttgactatct tacttcatgc aaagaaggga cacatatgag attcatcatc acatgagaca 2700
gcaaatacta aaagtgtaat ttgattataa gagtttagat aaatatatga aatgcaagag 2760
ccacagaggg aatgtttatg gggcacgttt gtaagcctgg gatgtgaagc aaaggcaggg 2820
aacctcatag tatcttatat aatatacttc atttctctat ctctatcaca atatccaaca 2880
agcttttcac agaattcatg cagtgc aaat ccccaaagggt aacctttatc catttcatgg 2940
tgagtgcgct ttagaatttt ggcaaatcat actggctcact tatctcaact ttgagatgtg 3000
tttgtccttg tagttaattg aaagaaatag ggcactcttg tgagccactt taggggtcac 3060
tcctggcaat aaagaattta caaagagcaa aaaaaaaaaa aaaaaaaaaa aa 3112

<210> 469

<211> 2229

<212> DNA

<213> Homo sapiens

<400> 469

agctctttgt aaattcttta ttgccaggag tgaaccctaa agtggctcac aagagtgc 60
tatttctttc aattaactac aaggacaaac acatctcaaa gttgagataa gtgaccagta 120
tgatttgcca aaattctaaa gcgcactcac catgaaatgg ataaaggtta cctttgggga 180
tttgactgct atgaattctg tgaaaagctt gttggatatt gtgatagaga tagagaaatg 240
aagtatatta tataagatac tatgaggttc cctgcctttg cttcacatcc caggcttaca 300
aacgtgcccc ataaacattc cctctgtggc tcttgcaatt catatattta tctaaactct 360
tataatcaaa tacactttta gtatttgcgt tctcatgtga tgatgaatct catatgtgct 420
ccttctttgc atgaagtaag atagtcaact tattcaaaac ttacatcatc tctagattta 480
agagacaagg aagagcttct caggcagaag gaataatgta tgcctgacat gttcaaggaa 540
ttacaagtta gattttgttt aggtgcatgg gaggggttga tgggtgatgac agataaggct 600
ggagggatgg ggagaggctg tggctgtata cagcctcagt acaaggctaa gcattttaac 660
tttatactgg aaaaaaatc aaacaaaggg gagggataaa ggacttagtc atctttgcac 720
tggaaaacaa aatatgtaat taaattccca tagctgcatg taacattgaa tcttccagg 780
ttaaaaaaaa agttaatcct gtgatattaa tggaatgaca ttttgagggtc ttgagaatgg 840
gcacaaaagt gggaaatgaa tttcagtatg ggcaaagaca ctgaggatga tgttgattag 900
ataattcact ccgtaatgat catgctgtgt gctagtaagt ataaccctgg aaagatcttg 960

```

agatgcttcc cagcctgttc acagatcccc tgggcccagaa cactccttag gaaaaacagt 1020
cagctacata ttaggcagca acacgaaggg tctttgaaca aaatgagtaa tgttattcta 1080
cagtgtagaa aggtcacagt acagatctgg gaactaaata ttaaaaatga gtgtggctgg 1140
atatatggag aatgttgggc ccagaaggaa ccgtagagat cagatattac aacagctttg 1200
ttttgagggg tagaaatatg aaatgatttg gttatgaacg cacagtttag gcagcagggc 1260
cagaatcctg accctctgcc ccgtgggtat ctctcccca gcttggctgc ctcatgtcat 1320
cacagtattc cattttgttt gttgcatgtc ttgtgaagcc atcaagattt tctcgtctgt 1380
tttccctctca ttggtaatgc tcactttgtg acttcatttc aaatctgtaa tcccgttcaa 1440
ataaatatcc acaacaggat ctgttttcct gccatcctt taaggaaacac atcaattcat 1500
tttctaattg ccttccctca caagcgggac caggcacagg gcgaggctca tcgatgacc 1560
aagatggcgg ccgggcattt ctcccaggga tctctgtgct tccttttgtg ctctctgtgt 1620
gtgtggatat ttaagggggc tggaaatgtg caaaaacatg tcaactacta gacattatat 1680
tgtcatcttg ctgtttctag tgatgttaat tatctccatt tcagcagatg tgtggcctca 1740
gatggtaaag tcagcagcct ttcttatttc tcacctggaa atacatacga ccatttgagg 1800
agacaaatgg caagggtgtc gcataccctg aacttgagtt gagagctaca cacaatatta 1860
ttggtttccg agcatcacia acaccctctc tgtttcttca ctgggcacag aattttaata 1920
cttatttcag tgggctgttg gcaggaacaa atgaagcaat ctacataaag tcactagtgc 1980
agtgcctgac acacaccatt ctcttgaggt cccctctaga gatcccacag gtcatatgac 2040
ttcttgggga gcagtggctc acacctgtaa tcccagcact ttgggagggt gaggcagggtg 2100
ggtcacctga ggtcaggagt tcaagaccag cctggccaat atggtgaaac cccatctcta 2160
ctaaaaatac aaaaattagc tgggcgtgct ggtgcatgcc tghtaatccca gccccaacac 2220
aatggaatt

```

<210> 470

<211> 2426

<212> DNA

<213> Homo sapiens

<400> 470

```

gtaaattctt tattgccagg agtgaaccct aaagtggctc acaagagtgc cctatttctt 60
tcaattaact acaaggacaa acacatctca aagttgagat aagtgaccag tatgatttgc 120
caaaattcta aagcgcactc accatgaaat ggataaagggt tacctttggg gattttgcact 180
gcatgaattc tgtgaaaagc ttgttggata ttgtgataga gatagagaaa tgaagtatat 240
tatataagat actatgaggt tccctgcctt tgcttcacat cccaggctta caaacgtgcc 300
ccataaacat tccctctgtg gctcttgcct ttcatatatt tatctaaact cttataatca 360
aattacactt ttagtatttg ctgtctcatg tgatgatgaa tctcatatgt gtcccttctt 420
tgcatagaag aagatagtca acttattcaa aactttacat cattctagat ttaagagaca 480
aggaagagct tctcaggcag aaggaataat gtatgcctga catgttcaag gtaatacaag 540
ttagattttg tttagggtgca tgggaggggt tgatggtgat gacagataag gctggaggga 600
tggggagagg ctgtggctgt atacagcctc agtacaaggc taagcatttt aactttatac 660
tggaaaaaaa atcaaacaaa ggggagggat aaaggactta gtcacttttg cactggaaaa 720
caaaatatgt aattaaattc ccatagctgc atgtaacatt gaattcttcc aggttaaaaa 780
aaaaagttaa tctgtgata ttaatggaat gacattttga ggtcttgaga atgggcacaa 840
aagtgggaaa tgaatttcag tatgggcaaa gacactgagg atgatgttga ttagataaatt 900
cactccgtaa tgatcatgct gtgtgctagt aagtataacc ctggaaagat cttgagatgc 960
ttcccagcct gtccacagat cccctgggccc agaacactcc ttaggaaaaa cagtcagcta 1020
catattaggc agcaacacga aggtcttttg aacaaaatga gtaatgttat tctacagtgt 1080
agaaagggtc cagtacagat ctgggaacta aatattaaaa atgagtgtgg ctggatatat 1140
ggagaatgtt gggcccagaa ggaaccgtag agatcagata ttacaacagc tttgttttga 1200
gggttagaaa tatgaaatga tttggttatg aacgcacagt ttaggcagca gggccagaat 1260
cctgaccctc tgccccgtgg ttatctcctc cccagcttgg ctgcctcatg tcattcacagt 1320
attccatttt gtttgttgca tgtcttgtga agccatcaag attttctcgt ctgttttctt 1380
ctcattggta atgctcactt tgtgacttca tttcaaatct gtaatcccgt tcaaataaat 1440
atccacaaca ggatctgttt tctgcccatt cctttaagga acacatcaat tcattttcta 1500
atgtccttcc ctcacaagcg ggaccaggca cagggcgagg ctcatcgatg acccaagatg 1560

```

```

gcggccgggc atttctccca gggatctctg tgcttccttt tgtgcttctt gtgtgtgtgg 1620
atatttaaag gggctggaaa tgtgcaaaaa catgtcacta cttagacatt atattgtcat 1680
cttgctgttt ctagtgatgt taattatctc catttcagca gatgtgtggc ctcagatggt 1740
aaagtcagca gcctttctta tttctcacct ggaaatacat acgaccattt gaggagacaa 1800
atggcaaggt gtcagcatac cctgaacttg agttgagagc tacacacaat attattggtt 1860
tccgagcatc acaaacacccc tctctgtttc ttcactgggc acagaatttt aatacttatt 1920
tcagtgggct gttggcagga acaaatgaag caatctacat aaagtcacta gtgcagtgcc 1980
tgacacacac cattctcttg aggtcccttc tagagatccc acaggtcata tgacttcttg 2040
gggagcagtg gctcacacct gtaatcccag cactttggga ggctgaggca ggtgggtcac 2100
ctgaggtcag gagttcaaga ccagcctggc caatatggtg aaaccccatc tctactaaaa 2160
atacaaaaat tagctgggcg tgctggtgca tgcctgtaat cccagctact tgggaggctg 2220
aggcaggaga attgctggaa catgggaggc ggaggttgca gtgagctgta attgtgccat 2280
tgactcgaac cctgggcgac agagtggaaac tctgtttcca aaaaacaaac aaacaaaaaa 2340
ggcatagtca gatacaacgt ggggtgggatg tgtaaataga agcaggatat aaagggcatg 2400
gggtgacggg tttgccccac acaatg

```

2426

<210> 471

<211> 812

<212> DNA

<213> Homo sapiens

<400> 471

```

gaacaaaatg agtaatgtta ttctacagtg tagaaaggtc acagtacaga tctgggaact 60
aaatattaaa aatgagtgtg gctggatata tggagaatgt tgggcccaga aggaaccgta 120
gagatcagat attacaacag ctttggtttg agggttagaa atatgaaatg atttggttat 180
gaacgcacag ttaggcagc agggccagaa tctgaccct ctgccccgtg gttatctct 240
ccccagcttg gctgcctcat gtcacacag tattccattt tgtttgttgc atgtcttctg 300
aagccatcaa gattttctcg tctgttttcc tctcattggt aatgctcact ttgtgacttc 360
atttcaaatc tgtaatcccg ttcaaataaa tatccacaac aggatctggt ttctgccc 420
tctttaagg aacacatcaa ttcattttct aatgtccttc cctcacaagc gggaccaggc 480
acagggcgag gctcatcgat gacccaagat ggccggccggg catttctccc agggatctct 540
gtgcttcctt ttgtgcttcc tgtgtgtgtg gatatttaaa ggggctggaa atgtgcaaaa 600
acatgtcact acttagacat tatattgtca tcttgctgtt tctagtgtg ttaattatct 660
ccatttcagc agatgtgtgg cctcagatgg taaagtcagc agcctttctt atttctcacc 720
tctgtatcat caggtccttc ccaccatgca gatcttctg gtctccctcg gctgcagcca 780
cacaaatctc ccctctgttt ttctgatgcc ag

```

812

<210> 472

<211> 515

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1) ... (515)

<223> n = A,T,C or G

<400> 472

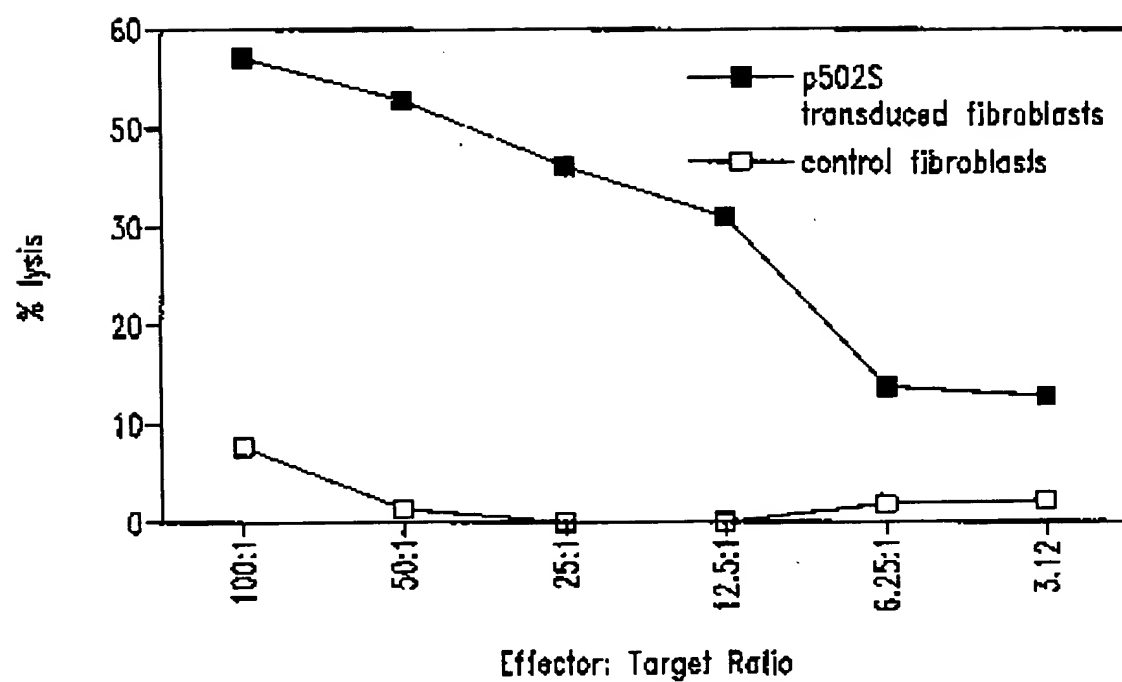
```

acggagactt attttctgat attgtctgca tatgtatggt tttaagagtc tggaaatagt 60
cttatgactt tcctatcatg cttattaata aataatacag cccagagaag atgaaaatgg 120
gttccagaat tattggctct tgcagcccg tgaatctcag caagaggaa caccaactga 180
caatcaggat attgaacctg gacaagagag agaaggaaca cctccgatcg aagaacgtaa 240
agtagaaggt gattgccagg aatggatct ggaaaagact cggagtgagc gtggagatgg 300
ctctgatgta aaagagaaga ctccacctaa tcctaagcat gctaagacta aagaagcagg 360
agatgggcag ccataagtta aaaagaagac aagctgaagc tacacacatg gctgatgtca 420

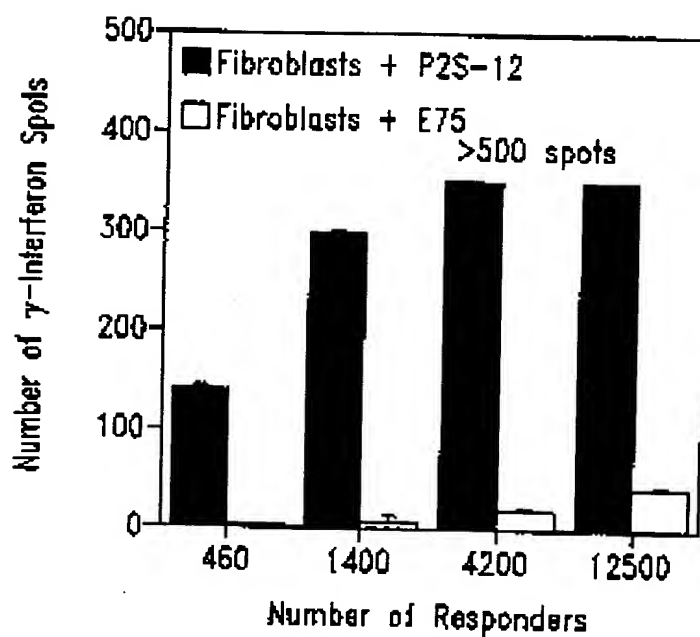
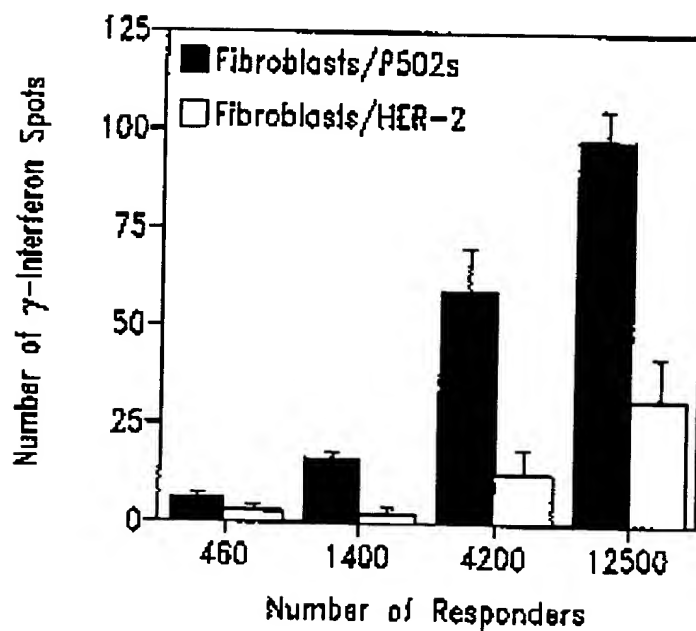
```

cattgaaaat gtgactgaaa atttgaaaat tctctcaata aagtttgagt tttctctgaa 480
gaaaaaaaaa naaaaaaaaa aaanaaaaan aaaaa 515

1/5

*Fig. 1*

2/5

*Fig. 2A**Fig. 2B*

3/5

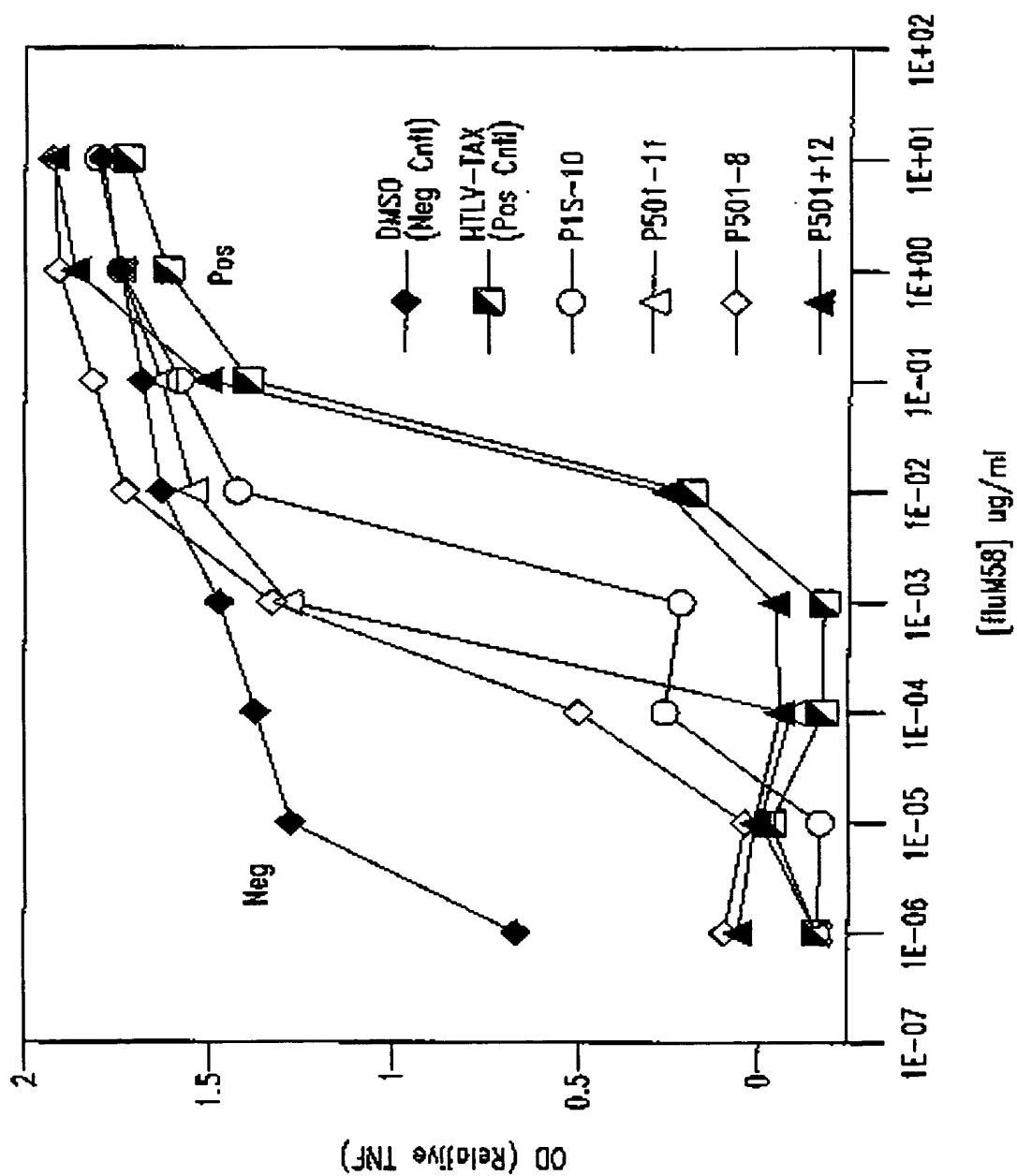
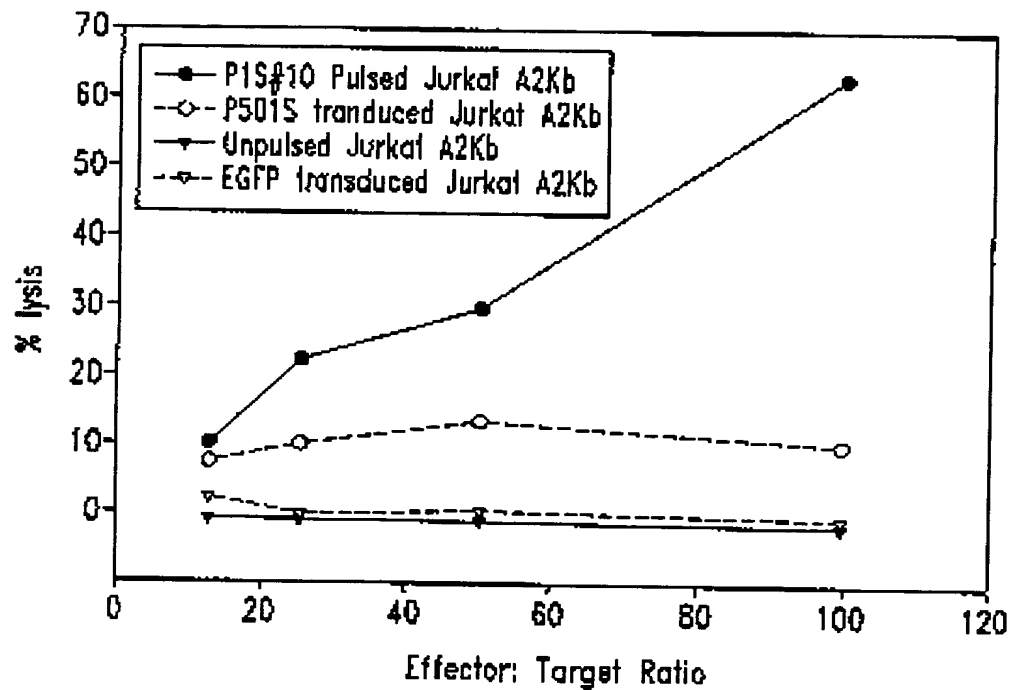
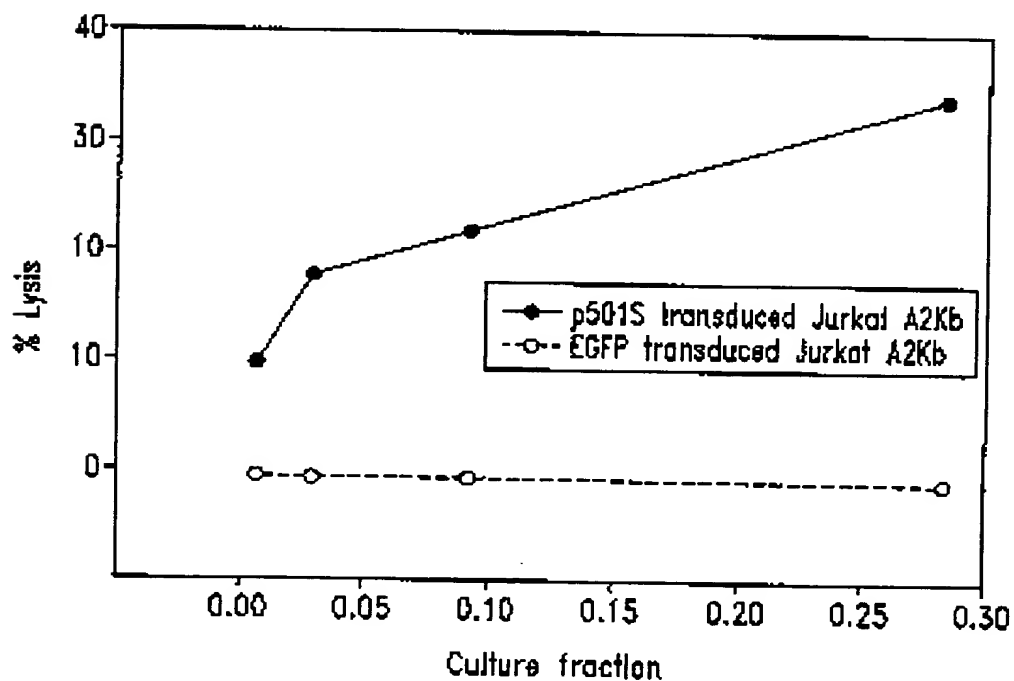


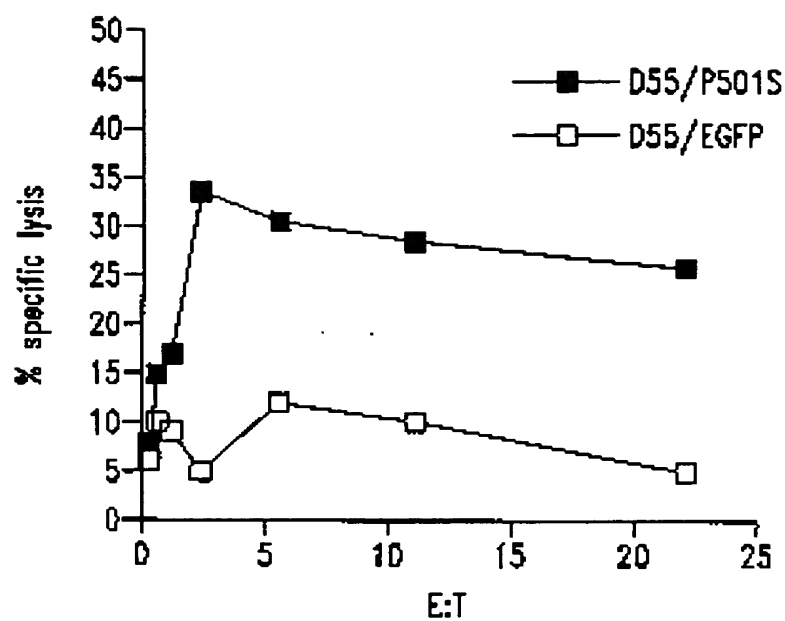
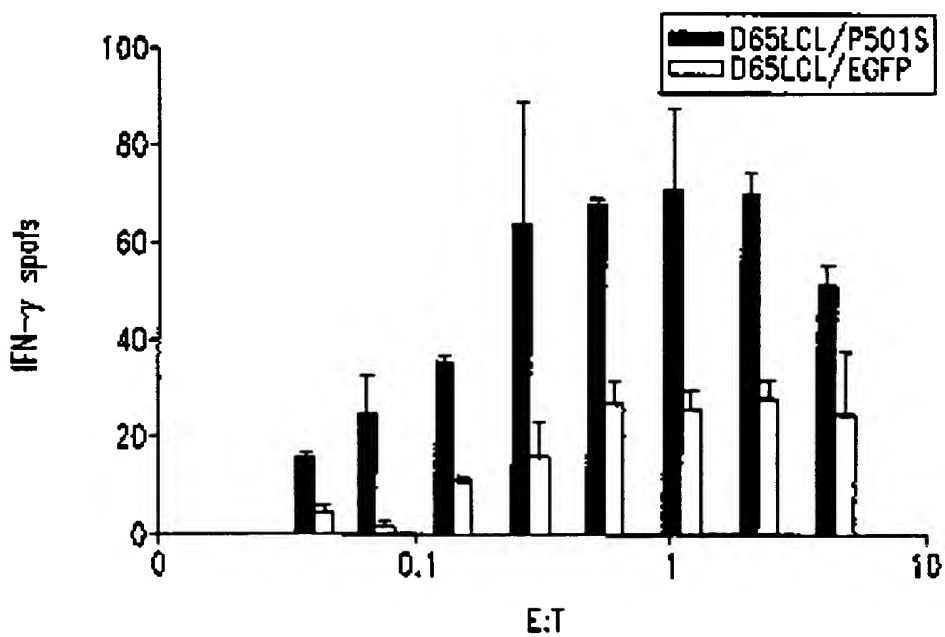
Fig. 3

4/5

*Fig. 4**Fig. 5*

SUBSTITUTE SHEET (RULE 26)

5/5

*Fig. 6**Fig. 7*

SUBSTITUTE SHEET (RULE 26)

SEQUENCE LISTING

<110> Corixa Corporation

<120> COMPOUNDS FOR IMMUNOTHERAPY AND DIAGNOSIS
OF PROSTATE CANCER AND METHODS FOR THEIR USE

<130> 210121.42701PC

<140> PCT

<141> 1999-07-08

<160> 472

<170> FastSEQ for Windows Version 3.0

<210> 1

<211> 814

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(814)

<223> n = A,T,C or G

<400> 1

tttttttttt	tttttcacag	tataaacagct	ctttattttct	gtgagttcta	ctaggaaatc	60
atcaaatctg	aggggttgtct	ggaggacttc	aatacacctc	ccccatagt	gaatcagctt	120
ccaggggggtc	cagtcctctct	ccttaattcca	tcccatccc	atgccaaagg	aagacrrtcc	180
ctccttgggt	cacagccttc	tctaggcttc	ccagtgcctc	caggacagag	tgggttatgt	240
tttcagcttc	atccttgctg	tgagtgctg	gtgggttgtg	cctccagctt	ctgctcagtg	300
cttcattggac	agtgtccagc	acatgtcaat	ctccactctc	tcagtgtgga	tcactagtt	360
ctagagcggc	cggccacggc	gtggagctcc	agcttttgtt	cccttttagtg	agggttaatt	420
gcgcgcttgg	cgtaatcatg	gtcataactg	tttcctgtgt	gaaattgtta	tccgctcaca	480
attccacaca	acatacagag	cggaaagcata	aagtgtaaag	cctgggggtgc	ctaatgagtg	540
anctaaactca	cattaattgc	gttgcgctca	ctgnccgctt	tccagtcngg	aaaactgtcg	600
tgccagctgc	attaatgaat	cggccaaacgc	ncggggaaaa	gcggtttcgc	ttttgggggc	660
tcttcagctt	ctgctcact	nantcrtgcs	ctcggtcntt	cggctgcggg	gaacgggtatc	720
actcctcaaa	gynngtatta	cggttatccn	naaatcnggg	gataccctngg	aaaaaanttt	780
aacaaaaggg	cancaaaggg	cngaaacgta	aaaa			814

<210> 2

<211> 816

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(816)

<223> n = A,T,C or G

<400> 2

acagaantgt	tggatggctg	agcacctttc	tatacgactt	acaggacagc	agatggggaa	60
ttcatggctg	tbggagcaat	agaaocccag	ttctacgagc	tgtgatcaa	aggacttggc	120

ctaaagtctg	atgaacttcc	cbatcagatg	agcatggatg	attggccaga	aetgaagaaag	180
aagttrgcag	atgtatttgc	aaagaagacg	aaggcagagc	agtgatcaaat	ctttgacggc	240
acagatgcct	gtgtgactcc	ggttcttga	tttgaggagg	ttgttcatca	tgatcacaaac	300
aaggaaacggg	gctcgtttat	caccagttag	gagcaggacg	tgaagccccc	ccctgcaccc	360
ctgctgttaa	acaccccagc	catcccttct	ttcannaggg	atccactagt	tctagaaagcg	420
gdcydcaccc	oggtggagct	ccagcttttg	tcccttttag	tgaagggttaa	ttgcgcgctt	480
ggcgtaatca	tggatcatagc	tgtttccctgt	gtgaaattgt	tatccgctca	caattccccc	540
aacatccgag	cgggaacata	aagtgttaag	cctgggggtgc	ctaatgantg	agctaactcn	600
cattaattgc	gttgcgctca	ctgcacgctt	tccagtcggg	aaaactgtcg	tgcuaatgen	660
ttantgaatc	ngccaccccc	cgggaaaagg	cggttgcttt	tgggacctct	tccgctttcc	720
trgctcattg	atcctngcnc	ccggctcttcg	gctgcggnga	acggtttact	ccccaaggcc	780
ggntntccgy	ttatccccc	acnggggata	ccnga			816

<210> 3
 <211> 773
 <212> DNA
 <213> Homo sapien

 <220>
 <221> misc_feature
 <222> (1)...(773)
 <223> n = A,T,C or G

<400> 3						
cttttgaaag	aaagggatggc	tgggggtgttt	aacagcagag	gtgcagggcg	ggggctcacg	60
tcctgctcct	cactgggtgat	aaacgagccc	cgttccttgt	tgtgatcatg	atgaacaaac	120
tcctcaaaag	tcagaaacgg	agtcacacag	gcattctgtc	cgtcaagat	ttgacaccac	180
tctgccttgc	ttttctttgc	aaatacatct	gcacaactct	tcttcatttc	tggccaatca	240
cccatgctca	tctgattggg	aagttcatca	gaatttagtc	caantccctt	gacagcagc	300
tcttagaact	ggggttctat	tgtccaaca	gccatgaatt	ccccatctgc	tgtcctgtaa	360
gtcgtataga	aaggctgctcc	accatecaac	atgttctgtc	ctcgaggggg	ggcccgggtac	420
ccaattcggc	ctatantgag	tctgattacg	cgcgctcaact	ggcugtctgt	ttacaargtc	480
gtgactggga	aaacccctggg	cgttaaccaac	ctaactgcct	tgcagcaact	ccccctttcg	540
ccaagctggc	gtaatanoga	aaaggccgcg	accgatcgcc	cttccaaacag	ttgrrcact	600
gaatgggnaa	atgggacccc	cctgttaacc	cgcattnaac	ccccgcnagg	tttngttgtt	660
accccccact	nnacccgcta	caatttgcra	gcgccttanc	gcgcgctccc	tttnccttt	720
cttcccttcc	tttncnccn	ctttccccc	gggtttcccc	ntcaaaaccc	cna	773

<210> 4
 <211> 828
 <212> DNA
 <213> Homo sapien

 <220>
 <221> misc_feature
 <222> (1)...(828)
 <223> n = A,T,C or G

<400> 4						
cctcctgagt	cctaactgac	tgtgctttct	gggtgaggat	ccagggctgc	taggaaaagg	60
aatgggcaga	cacaggctgt	tgccaatgtt	tctgaatgg	gtataatttc	gtcctctcct	120
tgggaacact	ggctgtctct	gaagacttct	cgtcagttt	cagtgaaggac	acacacaaag	180
acgtgggtga	ccatgttctt	tgtgggggtg	agagatggga	gggggtgggc	ccaccctgga	240
agagtggaac	gtgacacaa	gtggacactc	tctacagatc	atgaggata	agrtggagcc	300
acaatgcatg	aggcacacac	acagcaaggga	tgaactgtga	aacatagccc	auyctgtcct	360

```

gnggggcaactg ggaagccatan atnagggcrgt gagcanaxag aaggggagga lccactagtt 420
ctanagcggc cgcacacggc gtgganctcc ancttttgtt cccttttagtg aggggtaatt 480
gggggcttgg cntaatcatg gtcatanctn tttcctgtgt gaaattgtta tccgctccca 540
attccacaca acatacganc cgggaacata aantgtaaac clggggtgoc taatgantga 600
ctaactcaca ttaatttggt tgcgctcant gcccgcttcc caatcnggaa acctgtcttg 660
ccncttgcat tnatgaatcn gccaaucucc ggggaaaagc gtttguytt tgggcgctct 720
tcggcttccct cnotcantta ntccctnccn tcgggtcattc cggctgcngc aaacgggttc 780
accnctcca aagggggtat tccgggttcc cnaatccgg gganance 828

```

```

<210> 5
<211> 834
<212> DNA
<213> Homo sapien

```

```

<220>
<221> misc_feature
<222> {1}...{834}
<223> n = A,T,C or G

```

```

<400> 5
tttttttttt tttttactga tagatggaat ttattaagct tttccatgt gataggacat 60
agtttttaatt gcattccaaag tactaacaaa aactctagca atcaagastg gcagcatgtt 120
attttataac aatcaacacc tgtggctttt aaaatttggc tttcataaga taatttatcc 180
tgaagttaatt ctggccatgc ttttaaaaaa tgcttttaggt cactccaagc ttggcagtta 240
acatttggca taacacastaa taaaacaaatc acaatttaat aaataaanaa tacaacattg 300
taggcctataa tcatatacag tataaggaaag aggtcagtagt gttgagtaag cagttattag 360
aatagaaatc ctgggctctc atgcaaatat gtctagacac cttgattcac tcagccctga 420
cattcagttt tcaaaagtayg agacagggttc taccgtatca tttacagtt tccaacacat 480
tgaanaacag tagaaaatga tgaattgatt tttattaatg cattacatcc tcaagagtta 540
tcaccaaccc cttaggtata aaaaatttcc aagttatatc agtcatataa cttaggtgtgc 600
ttatttttaa ttagtgttaa atggtttaa tgaagacanc aatgggtccc taatgtgatt 660
gatattgggc atttttaccg gcttctaaat ctnaactttc aggtttttga actggaacat 720
tgnatnacag tgttccanag ttncacacta ctggaacatt acagtggtgt tgattcaaaa 780
tgttattttg ttaaaaatta aattttaacc tgggtggaaaa ataatttgaa atna 834

```

```

<210> 6
<211> 818
<212> DNA
<213> Homo sapien

```

```

<220>
<221> misc_feature
<222> {1}...{818}
<223> n = A,T,C or G

```

```

<400> 6
tttttttttt tttttttttt aagacccctca tcaatagatg gagacataca gaaatagtcn 60
aacccacatct acaaaaatgcc agtatcaggc gggggcttcg aagccaaagt gatgtttgga 120
tgtaaagtga aatattagtt ggcggatgaa gccgatagtg aggaaagtgt agccaataat 180
gacgtgaagt ccgtggaaagc ctgtggctac aaaaaatgtt gagccgtaga tccgctcgga 240
aatgggtgaag ggggaactcga agtactctga ggcctgtagg agggtaaaat aagagacccag 300
taaaattgta ataagcagtg cttagaattat ttgggtttcgg ttgttttcta ttagactatg 360
gtgagctcay gtgattgata ctccctgatgc gagttaatacg gatgtgttta ggaagtgggac 420
ttctagggga tctagcgggg tgatgctgtt tgggggcacg tgcctccta gttggggggt 480
aggggctagc ctggagtggt aaaaggctca gaaaaatcct gcgaagaaaa aaactttctg 540

```

```

ggtaataaat aggattatcc cgtatcgaag gccctttttgg acaggctggcg tgtggcggcc 600
ttgggtatgtg cttctctcgtg ctacatcgcg ccactcattgg tatatggtta gtgtgttggg 660
ttantanggc ctantatgaa gaactttttgg antggaatta aatcaatngc ttggccgga 720
gtcattanga nggctnaaaa ggccttgtta ngggtctggg ctnggtttta ccnaccat 780
ggaatncccc ccccggaana ntgnatccct attcttaa 818

```

```

<210> 7
<211> 817
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> {1}...{817}
<223> n - A,T,C or G

```

```

<400> 7
tttttttttt tttttttttt ttgctctaga gggggtagag ggggtgctat agggtaanta 60
cgggccccat ttcaaaagatt tttaggggaa ttaattctag gacgatgggt atgaaactgt 120
ggtttgrtcc acagatttca gagcattgac cgtagtatac ccccggtcgt atagcggta 180
aagtggcttg gtttagacgt ccgggaattg catctgtttt taagccta atgtgggacag 240
ctcatgagt caagacgtct tgtgatgtaa ttattatacn aatgggggct tcaatcggga 300
gtactactcg attgtcaacg tcaaggagtc gcaggctggc tggttctagg aataatgggg 360
gaagtatgta ggaattgaag attaatccgc cgtagtccgt gttctcctag gttcaatcc 420
attggtggcc aattgatttg atggtaaggg gagggatcgt tgaactcgtc tgttatgtaa 480
aggaatnctt ngggatyyga aggcnatnaa ggactangga tnaatggcgg gcangstct 540
tcaaacngtc tctanttcct gaaacgtctg aaatgtcaat aanaaattaan ttngttatt 600
gaatnttany gaaaagggtt tacaaggacta gaaccacaat angaaaanta atnntaangg 660
cattatcctn aaaggtnata accnctcta tnatccacc caatngnatl ccccaacnctn 720
acnabtggat nccccanttc canaaanggc cncccccggg tgnannccnc cttttgttcc 780
cttnantgan ggttattenc cctngentt atcanc 818

```

```

<210> 8
<211> 799
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> {1}...{799}
<223> n = A,T,C or G

```

```

<400> 8
catttcgggg ttactttctt aaggaaagcc gagcggaagc tgctaacgtg ggaatcgggtg 60
cataaggaga actttctgct ggcacgctgt agggacaagc gggagagcga ctccgagcgt 120
ctgaagcgca cgtcccaga aagtggacttg gcactgaaac agctgggaca catcgcggag 180
tacgaacagc gctgaaagt gctggagcgg gaggtccagc agtctagccg cgtcctgggg 240
tgggtggcgg angcctganc cgtctgctt tgcctgcccc angtgggccg ccccccctg 300
acctgctcgg gtccaaacac tgagccctgc tggcgactt caagganaac ccccaangg 360
ggattttgct cctanantaa ggctcatctg ggctcgggac cccccacctg gttggccttg 420
tctttgawgt gagcccatg tcatctggtt cactgtctng gaccaccttt ngggagtgct 480
ctccttacaa ccacannatg cccggctcct cccggaacac antccancc tnggaaggat 540
caagncctgn atccactnnt nctanaaccg gcncncnccg cngtggaaac cncctlttgt 600
tcttttctnt tnaagggttaa tncgccttg gccctnccan ngtccctnnc ntlttccnnt 660
gttnaaattg ttangcncnc nccnntcccn cncnncnncn cccgaacccn anntctnnann 720

```

ncctgggggt nccnnngat tgaacenncc nccctntant tgcnttnggg nccntgccc 780
ctttccctct nggyanncc 799

<210> 9
<211> 801
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> {1}...{801}
<223> n = A,T,C or G

<400> 9
acgccttgat cctcccaggc tgggaactggc tctgggagga gccgggcatg ctgtgggttg 60
taangatgac actcccaag gtggtcctga cagtggcccga gatggacatg gggctcact 120
caaggacaag gccaccaggc gggggggucg aagcccacat gatccctact ctatgagcaa 180
aatccctgt gggggcttct ccttgaagtc cgcacacagg gctcagtctt tggaccocag 240
caggtcatgg ggttgtnnc caactggggc vcncaacgca aaangggcnc gggcctcngn 300
caccatccc angacggggc taactnctg gacctccnc tccaccactt tcatgagctg 360
ttcctacccg cgnatnctc ccanctgtt cngtgcncac tccanctct nggacgtgag 420
ctacatacgc ccggatcnc nctcccgctt tgtccctatc caggtncan caacaaattt 480
cnccntantg caccnatcc cacttttnc agnttccnc nccgngcttc cttntaaaag 540
ggttganccc cggaaaatnc cccaaagggg gggggcngg taccacaactn cccctnata 600
gctgaantcc ccatnaccnn gactcnatgg anccntccnt cttannacn tctnnaactt 660
gggaananco ctgncctn ccccnctaa tcccnccctg cnangnncnt ccccnctcc 720
ncccnntng gcntntnann cnaaaaggc cnnnancaa tctcctnncn cctcanttcg 780
ccanccctcg aatcgccn c 801

<210> 10
<211> 789
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> {1}...{789}
<223> n = A,T,C or G

<400> 10
cagtctatnt ggcagtggt gacagcttcc ctgtggctgc cggatgcaca tgcctgtccc 60
acagtggtggc cgtggtgaca gcttcagccg ccttcacccg gtccacctc tcagccctgc 120
agatcctgac ctacacactg gcctccctct accacgggga gaagcaggtg ttcttggcca 180
aataccgagg ggcactgga ggtgctagca gtgaggacag cctgatgacc agcttctgac 240
caggccctaa gcctggagct ccttcccta atggacacgt ggggtgctga ggcagtyggc 300
tgctccacac tccaccgag ctctgggggg cctctgctg tcatgtctcc gtacgtgtgg 360
tggtgggtga gccaccgan gccaggggtg ttccgggucg gggcatctgc ctggaacctg 420
ccatcctgga tagtgcttc tctgtccca tatgggtgtc tccctgttta tgggtccat 480
tgtccagctc agccagctg tcnctgccta tatgtgtct gcrgcaggcc tgggtctgg 540
cccatttact ttgtacaca ggtantattt gacaaggaacg anttggcaca atactcagcg 600
tcaaaaaatt ccagcaacat tgggggtgga aggcctgcct cactgggtcc aactcccgcc 660
tctgttcaac cccatggggc tgcgggttg gccgccaatt tctgttctg ccaaanctat 720
gtggctctct gctgcaccc gtgtgctggc gaagtgcnta cngcncanct nggggggtng 780
ggngtccc 799

<210> 11
 <211> 772
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> {1}...{772}
 <223> n = A,T,C or G

<400> 11
 cccacccctac ccaaatatta gacaccaaca cagcaaaagct agcaatggat tccccttctac 60
 ttgtttaadt aaataaattt atatttttaa tgcctgtgbc tctgtgatgg caacagaagg 120
 accaacaggc cacatcctga taagaaggtaa yagggggggg gatcagcaaa aaggaagtg 180
 tctgggctga ygggacctgg ttcttgtgtg ttgccccctca ggaactottcc cctacaaata 240
 actttcatac gtccaatcc catgggggag tgtttcctcc tagaaactcc cctgcaagag 300
 ctacattaaa cgaagctgca ggttaagggg cttanagabg ggaacccagg tgactgagtt 360
 tattcagctc ccaaaaaccr ttctctaggc gtgtctcaur taggaggcta gctgttaacc 420
 ctgagccctgg gtaattccac tgcagagtc cgcatttcc gtgcatgga cccttctggc 480
 ctccctgtat aagtcragar tgaaccccc ttggaaggno tccagtragg cagccctana 540
 aactggggaa aaaaagaaaag gacgccccan cccccagctg tgcantacg cactcaara 600
 gcacggggtg gcagcaaaa aaccarttta ctctggcaca aacaaaact nggggggggc 660
 accccggcac ccnangggg gttaacagga anongggnaa cntgggaacc aattnaggca 720
 ggcccccac ccnaatntt gctgggaaat tttccctccu utaaattntt tc 772

<210> 12
 <211> 751
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> {1}...{751}
 <223> n = A,T,C or G

<400> 12
 gccccaatte cagctgccc accaccacg gtgactgcat tattyccgat gtcatacaaa 60
 agrtgattga agcaacctc tactttttgg tctgtagcct ttgtcttggg gcaggtttca 120
 ttggtgtgtt tggtagcgtt gtcattgcaa cagaatgggg gaaaggcact gttctctttg 180
 aagtanggtg agtcctcaaa atccgtatag ttggtgaagc cagagcactt gagcccttcc 240
 atggtggtgt tccacacttg agtgaagtc tccctgggaa cctaatcttt ctltgatggc 300
 ggcactarca gcaacgtcag ggaagtgtc agccattgtg gtgtacacca aggcgaccac 360
 agcagctgcn acctcagcaa tgaagatgan gaggagagtg aagaagaacy tcnngggggc 420
 accttgcctc tcagtctlan ccccatanca gccctgaaa accaananca aagaccarna 480
 cnccggctgc gatgaagaaa tnaccccncc ttgacaaact tgcattggcac tgggancac 540
 agtggcccca acaatcttca azaaggatgc cccatcnatt gaccccccac atgcccactg 600
 ccaacagggg ctgccccacn cncnnaacga tganccnatt gnacaagatc tncntggtct 660
 tnatnaacnt gaacctgcn tngtggctcc tgttcaggno cnnggcctga cttctnaani 720
 aangaactcn gaagncccca cngganannc g 751

<210> 13
 <211> 729
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(729)
 <223> n = A,T,C or G

<400> 13
 gagccaggccg tccctctgcc tgcacctca gtggcaacac ccgggagctg ttttgtcctt 60
 tgtggancc cagcagtncc ctctttcaga actcantgac aagancctg aacaggagcc 120
 accatgcaat gcttcagctt cattaagacc atgatgatcc tcttcaattt gctcatcttt 180
 ctgtgtggtg cagccctgtt ggcagtgggc atctgggtgt caatcgatgg ggcactcctt 240
 ctgaagatct tggggccact gtctccagt gccatgcagt ttgtcaacgt gggctacttc 300
 ctcatcgca cggcgcttgt ggtcttagut ctagggttcc tggggtgcta tgggtgctaag 360
 actgagagca agtgtgccc cgtgacgttc ttcttcctcc tcttctcat cttcatlgt 420
 gaggttgcaa tgcctgtggtc gccttgggtg acaccacaat ggctgagcac ttcttgargt 480
 tgcctgctat gcttgcacac aaaaaagat tatgggttcc cagggaact tcaactcaat 540
 gttggaacac caccatgaaa gggctcaagt gctgtggtt cnnccacta tccggatttt 600
 gaagantcac ctacttcana gaaaanagt cctttcccc atctctgttg caattgacaa 660
 acgtcccaa cacagccaat tgaagacctg caccacccc aaanggggtcc ccaaccanaa 720
 attnaaggg 729

<210> 14
 <211> 816
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(816)
 <223> n = A,T,C or G

<400> 14
 tgccttctct caaagttgtt cttgtttgca taaczaccac cataggtaaa gcgggcgag 60
 tgttcagctga aggggttgta gtaccragcg gggatgctct ccttgacagag tccctgtgtct 120
 ggcaggtcca cgcagtgcc tctgtcactg gggaaatgga tgcgctggag ctctcaaaag 180
 ccactcgtgt attttcaca ggcagcctcg tccgacgctg cggggcagtt ggggggtgtct 240
 tcacactcca ggaactgtc natgcagcag ccattgtgc agcggaaactg ggtgggtga 300
 cangtgcay agcaactgg atggcgctt tccatgnaan gggccctgng ggaagtcct 360
 tgancccan anctgcctct caaangcccc acctgcaca ccccgacag ctggaatgga 420
 ctcttcttcc cgaaggttag ttnttcttgc tgcccaanc anccccntaa acaaactct 480
 granatctgc tccgnggggg tcntantacc ancggtggaa aagaaccccc ggcngcgaac 540
 caancttgtt tggatncaaa gcnataatct nctnttctgc ttggtggaca gcaccantna 600
 ctgttuanct ctagnconty gtctctntgg gttgncttg accctaactn ccnntcaact 660
 gggacaaggt aantngcent ccttttaatt cccnancntn cccctgggt tggggctttt 720
 cncnctcta cccagaaaan nccgtgtter ccccaacta ggggcnaaa ccnnttnttc 780
 caccacctn cccacccac gggttcngnt ggttng 816

<210> 15
 <211> 783
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(783)
 <223> n = A,T,C or G

<400> 15

ccaaggcctg	ggcaggcata	naattgaagg	tacaacccca	ggaaacccctg	gtgctgaagg	60
atgtggaaag	cacagatttg	cgctactgc	ggggtgacac	ggatgtcagg	gtagagagga	120
aagacccaaa	ccaggtggaa	ctgtggygac	tcaagggaag	ccctacctg	ttccagctga	180
cagtgaclag	ctcagaccac	ccagaggaca	cggcgaacgt	cacagtcaat	gtgctgtcca	240
ccaagcagac	agaagactac	tgcctcgcat	craacaangt	gggtcgtctg	cggggctctt	300
tcccacgctg	gtactatgac	ccracggagc	agatctgcac	gagtttcgtt	tatggaggct	360
gcttgggcaa	caagaacaa	taccttcggg	aagaagagtg	cattctancc	tgtcnggggt	420
tgcagggtgg	gcctttgana	ngrancctcg	gggtctcangc	gactttcccc	ccgggccccct	480
ccatggaaag	gccccatcca	ntgtttctctg	gcacctgtca	gcctacccag	ttcggctgca	540
ncaatggctg	ctgcatacac	antttccctg	aattgtgaca	acacccccca	ntgcccccaa	600
ccctccraac	aaagcttccc	tgttnaanaa	tacnccantt	ggcttttnac	aaacnccggg	660
cncctccntt	ttcccccnnn	aacaaagggc	ncnngenttt	gaactgccc	aaacnnggaa	720
ctnccnngg	aaaaantncc	ccccctgggt	ctnnaancc	ccctcncnaa	anctncccccc	780
ccc						783

<210> 1.6

<211> 801

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(801)

<223> n = A,T,C or G

<400> 16

gccccaatc	cagctgcac	accacccacg	gtgactgcat	tagttcggat	gtcatacaaa	60
agctgattga	agcaacccctc	tactttttgg	tdgtgagcct	tttgcttgg	gcagggtttca	120
ttggctgtgt	tggtagcgtt	gtcattgcaa	cagaatgggg	gaaaggcact	gttctctttg	180
aagtaggatg	agtccctcaa	atcgtctcag	ttggtgaagc	caragcactt	gagccctttc	240
atggtggtgt	tcacacttg	agtgaagctt	tcctgggaac	cataatcttt	cttgatggca	300
ggcactacca	gcaacgtcag	gaagtgcctca	gcctattgtgg	tgtacaccac	ggcgaccaca	360
gcagctgcaa	cctcagcaat	gaagatgagg	aggaggatga	agaagaaagt	cncgaggggca	420
cacttgctct	cgtctcttagc	accatagcag	cccaaggaac	caagagcaaa	gaccacaacg	480
ccngctgcga	atgaaagaaa	ntacccacgt	tgacaaactg	cattggccact	ggacgacagt	540
tggcccgaa	atcttcagaa	aagggatgcc	ccatcgattg	aacacccana	tggccactgc	600
cnacagggct	gcncncncn	gaagaatga	gccattgaa	aaggatcctc	ntggtcttaa	660
tgaactgaaa	ccntgcctgg	tggccctgt	tcagggtctt	tggcagtga	ttctganaaa	720
aaggaacngc	ntnagccccc	cacaangana	aaacaccccc	gggtgttgcc	ctgaattggc	780
ggccaaggan	ccctgccccn	g				801

<210> 17

<211> 740

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(740)

<223> n = A,T,C or G

<400> 17

ytgagagcca	ggcgtacctc	tgcctgcccc	ctcagtggca	acaccogggg	gctgttttgt	60
------------	------------	------------	------------	------------	------------	----

cctttgtgga	gcctcagcag	ttccctcttt	cagaactcac	tyccaagagc	cctgaacagg	120
agccaccatg	cagtgcctca	gcttcattaa	gacctatgat	atctctctca	atttgcctcat	180
ctttctgtgt	ggtagagccc	tgttggcagt	gggcattctg	gtgtcaatcg	atggggcattc	240
ctttctgaag	atcttcgggc	cactgtctgc	cagtgcctatg	cagttctgtca	acgtgggcta	300
ctccctcctc	gcagccggcg	ttgtggtctt	tgtctcttgt	ctcctgggct	gctatgggtgc	360
taagacggag	agcaagtgtg	ccctcgtgac	gtctctcttc	atcctcctcc	tcactctcat	420
tgtctgaagt	gcagctgctg	tggtagcctt	gggtgtacacc	acaaatggctg	aaacattcct	480
gacgttgctg	gtantgctcg	cctcaanaaa	agcttatggg	ttcccaggaa	aaattcactc	540
aantctggaa	caccnccatg	aaaagggtct	caatttctgn	tggcttcccc	aactatacgc	600
gaattttgaa	agantcncct	tacttcaaaa	aaaaaanant	tgccttctnc	ccctttctgc	660
tgcactgaaa	acntcccaan	acngccaatn	aaaacctgct	cnuncaaaaa	ggntcncaaa	720
caaaaaaant	naagggttn					740

<210> 18
 <211> 802
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1) ... (802)
 <223> n = A,T,C or G

<400> 18						
ccgctgggttg	cgctgggtcca	gngnagccac	gaagcacgto	agcatacaca	gortcaatca	60
caagggtcttc	cagctgcgcg	acattacgca	gggcaagagc	ctccagcaac	actgcatatg	120
ggatcacactt	tacttttagc	gcaggggtga	caactgagag	gtgtcgaagc	ttattcttct	180
gagcctctgt	tagtggaggc	agattccggg	cttcagctaa	gtagttagcg	tatgtcccat	240
aaacaaacac	tgtgagcagc	cggaaaggtag	aggcaagctc	actctcagcc	agctctctaa	300
cattgggcat	gtccagcagt	tctcraaaca	cgtagacacc	agnggcctcc	agcactgat	360
ggatgaagtgt	ggccagcgct	gcccccttgg	ccgacttggc	taggagcaga	aattgctcct	420
ggttctgccc	tgtcaacttc	acttcgcac	tcactcactg	actgagtgtg	ggggacttgg	480
gctcaggatg	tccagagacg	tggttccguc	ccctccttca	atgacaccgn	ccanncaacc	540
gtcggctccc	gncgantgng	ttcgtctgnc	ctgggtcagg	gtctgtctgg	cactacttgc	600
aanccttcgtc	nggcccattg	aattcaucnc	acoggaactn	gtangatcca	ctnhtctcat	660
aaacggncgc	caccgcnhnt	ggaaetccac	tcttntctnc	ttactctgag	ggtaagggtc	720
accctttncc	ttaccttggc	ccaaacntn	contgtgtcg	anattngtna	tcnggncna	780
tnccanccnc	atangaagcc	ng				802

<210> 19
 <211> 731
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1) ... (731)
 <223> n = A,T,C or G

<400> 19						
cnaagcttcc	aggtnacggg	ccgcnaencc	tgaacnagg	tancanaang	cagncngcgg	60
gagcccaacg	tacagngng	ngtctcttat	nggggggggc	ggagcccat	cactggacnt	120
cntgaccccc	actccccc	nencantgca	gtgatgagtg	cagaactgaa	ggtnacgtgg	180
cagggaacca	gancgaahnc	tgtcccnctc	caagtcggcn	nagggggcgg	ggctggccac	240
gencatccnt	cnagtgtctn	saagcccnnn	cctgtctact	tgttctggag	acngcnngga	300

catgcccagn	gttanataac	nggcngagag	tnantlttycc	tctcccttcc	ggctgcgrcn	360
ngngctntgct	tagnnggarat	aacctgacta	cttaactgaa	cccnngaato	tnccnccct	420
ccactaagct	cagaacaaaa	aacttcgaca	ccactcantt	gtcacttgnr	tgtcagagta	480
aagtgtaccc	catncccaat	gtntgctnga	ngetctgncc	tgnctlangt	tgggtccctg	540
gaagacctat	caattnaagc	tatgtttctg	actgcctctt	gtccctcgnr	acaanccncc	600
cnncnntcva	aggggggggc	ggcccccaat	ccccccaacc	ntnaattnan	tttancccn	660
ccccnnggc	cggcctttta	cnancntcn	nnacnnggna	aaaccnnngc	tttccccaac	720
nnaatccncc	t					731

<210> 20
 <211> 754
 <212> DNA
 <213> Homo sapien

 <220>
 <221> misc_feature
 <222> (1)...(754)
 <223> n = A,T,C or G

<400> 20						
tttttttttt	tttttttttt	taaaaacccc	ctccattnaa	tynaaacctc	cgaattgtc	60
caacercctc	ntccaaatun	ccttttccgg	gnggggggtc	caaaccnaan	ctanttttgg	120
annttaaat	aatnttnt	tggnggnna	anccnaatgt	nangaaagt	naaccantta	180
tnanttnaa	tnccctgaaa	cngtngntt	ccaaaatnt	taaccctta	antccctcgg	240
aaatngttna	nygaacaccc	aatltctont	aagggtgtt	gaaggntnaa	tnaaaanccc	300
nnccaatgt	ttttngccac	gcctgaatta	attggnctcc	gntgttttcc	nttaaaanaa	360
ggnaacccc	ggttantnaa	ccccccnnc	cccaattata	ccgantttt	ttngaattgg	420
ganccccngg	gaattaacgg	ggnnmntccc	tnctgggggg	cnngnccccc	ccccntccgg	480
ggttnggggc	aggnnnaat	tgtttaaggg	tccgaacaaat	ccctccnaga	aaaaaanctc	540
ccaggttgag	ntnnggggtt	cccccccccc	canggccctt	ctcguanagt	tgggggttgg	600
ggggcctggg	attttnttcc	ccctnttccc	cccccccccc	ccnggganag	aggttngngt	660
tttgnctnnc	ggcccnccn	aaganccttn	ccganttnan	ctaaatccnt	gcctnggcga	720
agtcnnttgn	agggntaaan	ggccccctnn	cggg			754

<210> 21
 <211> 755
 <212> DNA
 <213> Homo sapien

 <220>
 <221> misc_feature
 <222> (1)...(755)
 <223> n = A,T,C or G

<400> 21						
atcancccat	gaccccnacc	nggggacccc	tcancgggnc	nnncnaacnc	ngggcnatca	60
ngtnaggnnc	actncnnttn	nacacnccc	ccccnactac	gcccunhanc	cnacgcncct	120
nnrcanattcc	actganngcg	cngntngan	ngagaaanct	nataccanag	ncaccanacn	180
ccagctgtcc	nanaangcct	nnnatacngg	nnnatcccat	ntgnancctc	cnaggtattn	240
nnrcnccan	gattttccct	anccgattac	ccntnccccc	tanccctcc	cccccaacna	300
cgaaggcnct	ggncnnaagg	nggcgnccc	ccgtagntcc	ccnncaagt	cnchcnccct	360
aactcannccn	nattacnccg	ttctngagta	tcactccccc	aatctccccc	tactcaactc	420
aaaaanctcn	gatacaaaat	aatncaagcc	tgnttatnac	actntgactg	ggctctctatt	480
ttagnngtcc	ntnaancncc	ctaatacttc	cagctcncct	tcncccatct	ccnaanggct	540
ctttcngaca	gcanttttgg	gttcccnntt	gggttcttan	ngaattggcc	ttctnngaac	600

gggtctctct	tctccctcgg	ttanccctgg	ttcnncgggv	cagttattat	ttcccttttt	660
aaattctntc	cncttctttt	tggcncttca	aaucuccggc	cttgaaaaag	gcacctgggl	720
aaaaggttgt	ttcganaaaa	tttttgtttt	gttcc			755

<210> 22

<211> 849

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(849)

<223> n = A,T,C or G

<400> 22

tttttttttt	tttttlangtg	tngtcgtgca	ggtagagggct	tactacaant	gtgaanacgt	60
acgctnggan	taangcganc	cgaattctag	gannccctct	aaatcanac	tgtgaagatn	120
atccctgnna	cggaanggtc	accggnggal	nntgctaggg	tgnccctctc	canncccttn	180
cataacteng	nggcccctgc	caccaccttc	ggcggcccch	ngnccggggc	cggtctattn	240
gnnttaaccc	cactnnngca	ncggtttccn	ncuccnnccg	accnngggca	tccggggtnr	300
tctgtcttcc	cctgnagncn	anaaantggg	cncggngccc	ctttaccctt	nnaccaagcc	360
cngcctctca	ncnccngccc	ccctccant	nggggggact	gcnanngct	cgttctctng	420
mauccccnn	gggtccctcg	gttgtctgnt	cnaccgnang	ccanggatcc	cnaagggaag	480
tgggttnttg	ggcccctacc	tctgtctncc	nnccaccttc	cgaananga	ncgctccccg	540
cnccnccnng	cctccctctg	caacaccccg	ctctctctng	ncggnncccc	ccccacccgc	600
ncctctcncc	ngnccgnanc	ctccnccncc	gtctctcann	ccaccccgcc	ccgcccagcc	660
ntcancaccc	ggnggaacng	nagcnccttc	gnccccgccn	ggcncnccct	cgcncngaa	720
ctnccctcng	ccantnnccg	tccanccnna	cnaaacggcc	ctgcgcggcc	cgnagccncc	780
ncctccnccg	gtccctcccg	ctccnccncc	angnatctcc	cagggaacac	nnaccccgcc	840
nnccngggg						849

<210> 23

<211> 872

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(872)

<223> n = A,T,C or G

<400> 23

ggcnaaaact	tacttctctc	gnactcgtgc	gcctcctctc	tcttttctct	cgcacccatg	60
tctgaananc	cgaattnggc	ngatatcnan	aagntcngnc	agtcacaaat	ganbaacaca	120
cacacnchan	aganaaatcc	netgccttcc	anagtanaen	attgaacnng	agaaccangc	180
nggcgaatcg	tactnagggc	tgcgcgcgca	atnctglcnc	gtttattntn	ccagctctnc	240
ctnccncccc	tactctcttc	nagctctctn	accctctngn	cgnauccccc	naggtcggga	300
tccgggtttn	notgacggng	cnnccctctc	ccctctccat	nacgancnc	ccgcaccacc	360
naungcncc	ncnccgnctc	cttcyccncc	ctgtctctnt	ccctctngcc	ctgggcnngn	420
accgcattga	cctctccgcn	ctnccngaaa	ccgnanaagc	ccgggttgcn	annanngctg	480
tgggnnngcg	tctgcnccgc	gttccctccn	ccnnccttcc	ccatcttctt	tacnngggct	540
ccnccgcttc	tcnccnccnc	cttggggaag	tntccctntg	ccctcttnac	tccnccctct	600
cgnccgtgnc	cgncccccac	ntcatttcca	nacqntcttc	ccaanncncc	ggutnctctc	660
cnccnccncc	gtcancnag	ggaaaggngg	ggnnccnctg	nttgaagttg	nggnngngtc	720
cgaanctcc	tccnccctcc	cctacccctc	cgggcgggnc	ctcngctncc	aaattancaa	780

ntctcccccgc ngngcncntc tcaagctcnc cccccccct ctctgcantg tntctctgtc 840
tnaccnnlac gantnttcgn cccctctctt cc 872

<210> 24
<211> 815
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> (1) ... (815)
<223> n = A,T,C or G

<400> 24
gcattgcagc ttgagtattc tatagngtca cctaaatanc ttggcctaata catggctenta 60
nctgnccttc tctgtcaaat gtatacnaaa tcnatctgaa tctnatntga ccaaganngtc 120
tcntncattt gtaacaantg tnttctccat cctgtcngan ccaattccca tnnattnccg 180
cgcattcncn gcnctantatn taatngggaa ntctnnutnnn ncacccnccat ctatctntcc 240
gcnccctgac tggagagat ggatnaattc tntnttgacc nacatgttca tcttggattc 300
aanancctcc cgcngncac ccgttngnng cnagccnntc ccaagacctc ctgtggaggt 360
aaccttgctc aganncatca aacntggga acccgcnnc anglnnaggt ngnnncan 420
gatercgtcc aggtctnacc ctccctcnc agcgccctc ttngtgccct anagngnagc 480
gtgtcnnan vntcaacat ganacgcgc agnccancgc caatlngga caatgtcngc 540
gaacccctc gggggantn tncaancc caggattgtc vncncangaa atcccnccac 600
ccnccctc ccnctttgg gacngtgacc aantcccgga glnccagtc gcccnngctc 660
ccccacgggt nccntgggg gggatgaact cngnntcanc cngnccaggn ntgnnaagg 720
accgncctn ggnccgann gacnntcnga agngccnnt cgtataacc cccctcncca 780
nccnncngnt agntccccc cngggctnctg aangg 815

<210> 25
<211> 775
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> (1) ... (775)
<223> n = A,T,C or G

<400> 25
ccgagatgtc tgcctccgct gccttagctg tgcctcgcct actctctctt tctggcctgg 60
aggctatcca ycgtaactca agattcagg tttaactcag tcatccagca gagaatggaa 120
agtaaaattt cctgcaattg tatgtgtctg ggttctatcc atccgacatt gaenttgact 180
bactgaayaa tgganagaga attgaaaaay tggagcattc agacttgtct ttcagcaagg 240
actggctctt ctatctctg tactacactg aaltccccc cactgaasaa gatgagtatg 300
cctgcctgtg gaaccatgtg acttctgtac agcccaagat agttaagtgg gatcgaaca 360
tgtacgcagc cnnccatggaa gtttgaaagt gcgcctattg gattgagatg attccaaatt 420
ctgcttgcct gcttctcaat antgatatgc ntatccaccc taccctttat gndcccaaat 480
tctaggggtt acatnangt tcnctnggga catgatctc ctttataant cncncttct 540
aattgcccgt cncctngttn ngaatgttcc cnaaacccgc gttggctccc ccaggtcnc 600
tcttacggaa gggcctgggc cnccttncaa ggttggggga accnaaaatt tcncttntgc 660
cncgcncnc cmtcttngg nncncaattt ggaacccctc cnatccccc ttgctcnaa 720
nccctncta anaaaacttn aaanogtngc naaanntttn acttccccc ttacc 775

<210> 26

<211> 820

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(820)

<223> n = A,T,C or G

<400> 26

```

anattantac agtgtaatct. tttcccaag agtggtanag ggaacggggc ctagaggcat      60
ccccanagata ncttatanaa acagtgcctt gaccaaagag tgcctgggcac atttcctgca      120
gaaaagggtgg cgggccccat. cactcctcct ctcccatagc catcccagag gggtagtag      180
ccatcanqcc btcgggtggg gggagtcang gaaacaacaa accacagagc anacagacca      240
ntgatgacca tggggggggag cggagcctct cctgnaccg gggtagcana nganagccta      300
nctgaggggt cacaatataa acgttaacga cmagatnan caoctgcctc aagtgcaccc      360
tctcatcctg acnaccagng acnnnaact gcngcctggg gacagcctc ggancagcta      420
acnnagcct. caoctgcctc ccatggccg tncgntccu tggctcctgnc aaggggaagct      480
cctgttgga attnaggga naccaaaggg nccoctcct ccactgtga aggaaaaann      540
gatggaattt tnccttccty gccnncccc tcttccttca caugccctc nntactctc      600
tccctctntt nctcgnenc acttttnacc cennnatttc cctlnaftga tcygannctn      660
ganattccac tnnccctnc cntenatng naanacnaaa nactntctna cccnggggac      720
gggnncctcg nctcctctct ctttttctct accnccnntt ctttgcctct ccttngatca
780tccaaacntc gntggcctn cccccccnnn tcttttccc
820

```

<210> 27

<211> 818

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(818)

<223> n = A,T,C or G

<400> 27

```

tctgggtgat ggcctcttcc tctcagggg cctctgactg ctctgggcca aagaatctct      60
tgtttcttct ccgagcccca ggcaggggtg attcagccct gcccaacctg attctgatga      120
ctgaggatgc tgtgacggac ccaaggggga aatagggtcc cagggtccag ggaggggggc      180
ctgctgagca cttccgcccc tcaacctgct cagccctgct catgagctct gggtgggtc      240
tccgacctca gggttctgct ctteacngca nqccanccag tggctgctgg ccacactggc      300
ttctctctgc ccttcctcty gctctgancr tctgtcttcc tgtcctgtgc angcnccttg      360
gctctcagtt tccctcctc anngaacctc gttctgann tcttcantta actntgantt      420
tatnaccnan tggmctgtnc tgtcnnactt taatgggccc gacgggtcaa tccctcctc      480
nctccttcc anttccnnna accnqcttnc cntctctcc ccttccccc cnggggaanc      540
ctcccttgc ctnaccang gccnnnacc ccttntctn ggggggcnng glnntnnc      600
ctgntnncc cncctcnnnt tncctgttcc cnnccnccn ngcannntc nngtcccn      660
tannctcttc ngntcgnaa ngntcncntn tnnnnngncc ngntnntncc tccctctcnc      720
cnnntgnag cnnntnnnc ncnngnccc nnnccnnnnn nggnntnnn tntncngc      780
ccnnccccc ngntttagg cctccnntct cgggcnc
818

```

<210> 28

<211> 731

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...{731}

<223> n = A,T,C or G

<400> 28

aggaaggggcg	gagggatatt	gtanggggatt	gagggatagg	agnataaalg	gggaggtgtg	60
tcccaacatg	anggtgnngt	tctcttttga	angagggttg	ngtttttann	ccnggtgggt	120
gattnaaccc	catgtgatgg	agnnaaagg	tttnagggat	ttttcggctc	ttatcagfat	180
ntanattcct	gtnaatcggg	aaatnatntt	tannnnggaa	aatnttgctc	ccatccgnaa	240
atttctcccg	ggtagtgcat	nttnggggg	cngccangtt	tcccaggctg	ctanaatngt	300
actaaagntt	naagtgggan	tcnaaatgaa	aacctnnuac	agagnatccn	taccggactg	360
tnnttttctt	tggccctntg	actctgcnn	agcccaatar	ccnnngnat	gtcnccmgn	420
unngcgunc	tgaaannnnc	tcngggctnn	gancatcang	gggtttcgca	tcaaaagcnn	480
cgttttncat	naaggcactt	tngccctcct	caaccnctng	ccctcnncca	tttngccgtc	540
nggttcttct	acgttntntg	onccctnnnt	ganaltttnc	ccgcttnggg	naandctctt	600
gnaatgggta	gggncttntc	ttttnacnnu	nggtntact	aatcnnctnc	acgentnctt	660
tctcnacccc	cccttttttt	caatccanc	ggcnaalggy	gtctcccn	cgangggggg	720
nnnccannnc	c					731

<210> 29

<211> R22

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...{822}

<223> n = A,T,C or G

<400> 29

actagtcacg	tgtgggtggaa	ttccattgtg	ttgyygnnc	ttctatgant	entnttagat	60
cgtctanacc	tccancctc	ccnaccnang	ctataangaa	nenuataga	netgtcnnt	120
atntntaone	tcatanncct	cnnaaccac	tccctcttaa	ccctactgt	gcttatngcn	180
tnnctantct	ttggcccttn	cnanceccn	gtgggcnac	cnenngnatt	ctnatctcc	240
tonccatntn	gcctananta	ngtncatacc	ctataccctac	nccaatgcta	nnnctaanen	300
ttccatnantt	annntaaata	ccactgaent	ngactttcnc	atnanctcct	aatttgaatc	360
taetctgact	cccacngcct	annnattagc	anentccccc	nacnatntct	caacccaate	420
ntcaacaaac	latctantg	ttcnccaaac	nttncctccg	atccccnnac	aaccccccctc	480
ccaaataccc	nccacctgac	ncctaaccnn	cccatcccg	gcaagccnnc	gynccatttan	540
ccactggagt	ccnntngga	naaaaaaac	ccnaccctctc	tanccnnnat	ctccclaaac	600
aatnctcctn	naatttactn	ncantnccat	caanccacn	tgaaacnnna	cccttggtttt	660
tanatccctt	ctttcgaaaa	ccnacccttt	annncccaac	ctttnggggc	cccccnctnc	720
ccnaatgaag	gncncccaat	cnangaaacg	nccttgaaaa	ancnaggcna	anannntccg	780
canatcttat	cccttanttn	ggggncctt	nccnngggcc	cc		822

<210> 30

<211> 787

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(787)

<223> n = A,T,C or G

<400> 30

cgcccgcccg	ctctggcaca	tgccttcctga	atggcatcaa	aagtgaigga	ctgcccatcg	60
ctggagagga	ccttctctcc	tactgtcatt	atggagccct	gcagactgag	ggctccctt	120
gtctgcagga	tttgatgtct	ggaatcctgg	agtgtggctt	ggagctcctc	atctacatna	180
gctggagggc	ctggaggggc	tctctcgcca	gcctccccct	tctctccagg	ctctccangg	240
acacccagggg	ctccaggcag	ccatttattc	ccagnangac	atgggtgttt	tcacagggga	300
cccatggggc	ctgnaaggcc	agggtctcct	ctgacacccat	ctctcccgct	ctgcttgcca	360
ggccgtggga	tcactantt	ctanaacggg	cgccaccncg	gtgggagctc	cagcttttgt	420
tcccttccct	gnaaggtta	tgcncgcttg	gcgtacatcat	nggtcnaaac	tncttccctg	480
gtgaatttgt	ttntccctc	ncnattccnc	ncnaccatac	aacccggga	cataaagtgt	540
tacagctctg	gggtngcctn	ngaattnaac	tnaacctcaat	caatttgctt	ggctccatggc	600
ccgctttccn	ttcnggaaa	ctgtctctcc	ctgcttntnt	gaatcgggca	ccccccnggg	660
aaaagcgggt	tgcctttctg	ggggctcctt	ccncttcccc	cctcncctaa	ccctnccgct	720
cggtcgttnc	nggtngcggg	gaaaggggat	nnctccccc	naagggggng	agnnngtat	780
cccccaa						787

<210> 31

<211> 799

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(799)

<223> n = A,T,C or G

<400> 31

tttttttttt	tttttttggc	gatgtacttg	tttaattgca	ggagggtggg	gtgtgtgtac	60
catgtaccag	ggctattaga	agcaagaggg	ggggaggggg	ggcagagngc	cctgttgagc	120
aacaaaggac	tectgcagcc	ttctctgtct	gtctcttggc	gcaggcccat	ggggaggcct	180
cccgccaggt	gggggcccac	agtcragggg	tgggagcact	acanggggtg	ggagtgggtg	240
gtggctggtn	cnaatggcct	gncacanate	cctacgattc	ctgacacctg	gatttcccca	300
ggggaccttc	tyttctccca	nggnaacttc	ntnnatctcn	aaagaacaca	actgtttctt	360
cngcanttct	ggetgttcat	ggaaagccca	ggtgtcnnat	ctngggtggg	acttggtaga	420
tatggctccg	gcccactct	ccntcnaaa	agtaattca	ccccccccc	ccntctnttg	480
cctgggccc	taantaccga	cacgggaact	canttantta	ttcatcttng	gntgggcttg	540
ntnatcncn	cctgaangcg	ccaagtcgaa	aggccacggc	gtncctnctc	cccatagnan	600
nttttntnt	canttaatgc	ccccccnggc	aacnatccca	tcccccccn	tgggggcccc	660
agcccaaggc	ccccgctcg	ggnnncnngn	cnngnantcc	ccaggntctc	ccantcngnc	720
ccnnngcnc	cccgccagca	gaacanaagg	ntngagccnc	cgcannnnnn	nggtcncnac	780
ctcgccccc	ccnnccngng					799

<210> 32

<211> 789

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(789)

<223> n = A,T,C or G

<400> 32

tttttttttt	tttttttttt	tttttttttt	tttttttttt	tttttttttt	tttttttttt	60
tttttttttt	tttttttttt	tttttttttt	tttttttttt	tttttttttt	tttttttttt	120
tttttttttt	tttttttttt	tttttttttt	tttttttttt	tttttttttt	tttttttttt	180
tttttttttt	tttttttttt	tttttttttt	tttttttttt	tttttttttt	tttttttttt	240
tttttttttt	tttttttttt	tttttttttt	tttttttttt	tttttttttt	tttttttttt	300
tttttttttt	tttttttttt	tttttttttt	tttttttttt	tttttttttt	tttttttttt	360
tttttttttt	tttttttttt	tttttttttt	tttttttttt	tttttttttt	tttttttttt	420
tttttttttt	tttttttttt	tttttttttt	tttttttttt	tttttttttt	tttttttttt	480
tttttttttt	tttttttttt	tttttttttt	tttttttttt	tttttttttt	tttttttttt	540
tttttttttt	tttttttttt	tttttttttt	tttttttttt	tttttttttt	tttttttttt	600
tttttttttt	tttttttttt	tttttttttt	tttttttttt	tttttttttt	tttttttttt	660
tttttttttt	tttttttttt	tttttttttt	tttttttttt	tttttttttt	tttttttttt	720
tttttttttt	tttttttttt	tttttttttt	tttttttttt	tttttttttt	tttttttttt	780
tttttttttt	tttttttttt	tttttttttt	tttttttttt	tttttttttt	tttttttttt	789

<210> 33

<211> 793

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> {1}...{793}

<223> n = A,T,C or G

<400> 33

gacagagcat	gttgyatggt	ggagcacctt	tctatacgac	ttacaggaca	gcagatgggg	60
aattcatggc	tgttggagca	atanaadccc	agttctacga	gclgctgatu	aaaggacttg	120
gactaaagtc	tatgaaactt	cccaatcaga	tgagcatgga	tgattggcca	gaaatgaaana	180
agaaagtttg	agatgtatct	gnaaagaaga	ogaaggcaga	gtggkgtcaa	atctttgacg	240
gcacagatgc	ctgtatgact	coggttctga	cttttgagga	ggttggttat	catgatcaca	300
acaaagaaag	gggtctgttt	atcaccantg	aggagcagga	ngtgagcccc	cgccttgac	360
ctctgctgtt	aaacaccccc	gcacatccct	ctttcacaag	ggatccacta	cttctagagc	420
ggncgcaccc	gggtggagc	tccagctttt	gttcccttta	gtgagggltc	attgcgcgt	480
tggcgtaatc	atggtcatat	ctgtttcttg	tgtgaaatct	ttatcgcctc	acaattccac	540
acacacaccc	anccggaagc	atnaaatctt	aaagcctggg	ggtngcctaa	tgantgaact	600
nactcanatt	aattggcttt	gcgtccactg	cccgttttcc	agtcaggaaa	acctgtcctt	660
gocagctgcc	nttaatgaat	cnggccaccc	cccggggaaa	aggcngcttg	cttnttgggg	720
cgcncttccc	gcctttctgc	ttcttgaant	ctttccccc	ggtctttcgg	cttgcggcna	780
acggtatcna	cct					793

<210> 34

<211> 756

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> {1}...{756}

<223> n = A,T,C or G

<400> 34

ggcgcgaccc	gcattgacga	gcaactcaag	ggcgcgaccc	accgtaaaag	ccccatctt	60
anccagtgcc	gggaanagct	gggtcgactc	aaagtagtgc	ttcggaggtc	unacttcttg	120

ccaaccacag	ggaccaagct	gannaaacag	cagctaatte	tggcccgtag	catactggag	180
atcgggggccc	atggyagcat	cctacggcaan	gacatcccc	ccttcgagcg	ctacatggcc	240
cagctcaaat	gctactactt	tgattacaan	ggcagctcc	cagagtccgc	ctatatgrac	300
cagctcttgg	gctcaccck	cctcttccg	ctgtcccaga	acggggtggc	tgantccac	360
acgganttgg	ancggctgcr	tgcccaange	calacacacc	aatgtctaca	tunaccacca	420
gtgctctggg	gcaatantga	tggaaggcag	ctaccncaaa	gbnttccg	cnnagggtta	480
catccccgc	cgagagctac	accttcttca	tbgacatcc	gtcgcacat	atcagggttg	540
aaaatcgng	ggttgcctca	gaaggctnc	aanaanaac	ttctcctga	aggccccgg	600
atnccctagt	ntagaatcg	gcccgcate	ggggtggac	ctccaacctt	tggttccct	660
tactcgagg	tttattgccc	cccttggcgt	tatcatggc	acnccngttn	cctgtgttga	720
aattnttaac	ccccacaa	tccangcna	cattng			756

<210> 35

<211> 834

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)... (834)

<223> n = A,T,C or G

<400> 35

ggggatctct	anacnacct	gnatgcctgg	ttgtcgggtg	ggcgcctgct	gatgaanag	60
aacaggatct	tggcccttga	gctctcggct	gctgtnttca	agtgtgtcag	tctgcccga	120
tgttcagaca	cctctctggg	caaaaacac	caggatntga	gtcttgattt	caactccaat	180
aactctcngg	gctgtctgct	cggtgaactc	gatgacnang	ggcagctggc	tgtgtntgat	240
aaantccanc	angtintcct	tggtgacctc	cccttcaaa	ttgttcgggc	cttcatcaaa	300
cttctnnaan	angannanc	canccttgtc	gagctggnat	ttgganaaca	cgtcacngtt	360
ggaaactgat	cccaaatggc	atgtcatcca	tgcctctgct	tgcccgcaaa	aaacttgctt	420
ggcnaaate	cgactcccn	tctctgaag	agccnatca	caacccccct	cctggactcc	480
nncaangact	ctnccgctnc	ccctccnng	cagggttggt	ggcannccgg	gcccctgggc	540
ttcttcagcc	agttcarnat	ntctctcagc	ccctctgcca	gctgttnbat	tcttgggggg	600
ggaanccgtc	tctcccttcc	tgaannaat	ttgaccgtng	gaatagccgc	gcntcncnt	660
acntnctggg	ccgggttcaa	antccctccn	cttgcgggcca	ttctggattt		720
ncnaacttt	ttctctcccc	cncccnccgg	ngtttggntt	ttctatnggg	ccccactct	780
gctnttggcc	antccctcgg	gggcncttan	cncccctnt	ggcaccntng	ggcc	834

<210> 36

<211> 814

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)... (814)

<223> n = A,T,C or G

<400> 36

cggnegcttt	cnnccgggc	cccgtttcca	tgacnaaggc	tccttccang	ctaaatacnn	60
cctagnazac	attaatgggt	tgctctacta	ctacatcata	cnaaccagta	agccctgccc	120
naacgccaac	tcagggccatt	cctaccaaag	gaagaaaggc	tggtctctcc	acnccctgta	180
ggaaaggcct	gccttgtsag	acaccacaat	ncggctgaat	ctnaagtctt	gtgttttaet	240
aatgggaaaa	aaaataaac	aanagggttt	gttctctcgg	ctgcccacgc	cagcctggca	300
ctaaaacanc	ccagcgctca	cttctgcttg	ganaaatatt	ctttgctctt	ttggacata	360

ggcttgatgg	tatcaactgac	acntttccac	ccagctgggc	ncctctccac	catntttgtc	420
antgancttg	agggcctgaa	ncttagtctc	caaaagtctc	ngccracaag	acgggccacc	480
aggggagtc	ntttccagtg	gatctgucac	anantaccac	tatcatcnn	gaataaaag	540
gccccgaaac	ganatgcttc	cancancttc	taagaccctc	aatcctngaa	ccatggtgcc	600
cttcgggtct	gatccnaaag	gaatgttctc	gggtcccaat	ccctcctttg	ttctttacgt	660
tgtnttggaac	contgctngn	atnacccaan	tganatccac	ngaagraccc	ttcccttggt	720
atttganttt	cntaaattct	ctgcuctaen	nctgaaagca	cnatccctn	ggcncnnaen	780
ggngaacctc	agaaggtctn	ngaaaaacca	cnctn			814

<210> 37

<211> 760

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> {1}...{760}

<223> n = A,T,C or G

<400> 37

gcattgctgt	cttctctcaa	gttggtcttg	ttgcataaac	aaccaccata	ggtaaacggg	60
gcragtggt	ngctgaaggy	gttgtagtar	cagcggggga	tgtctctctt	gcagagctct	120
gtgtctggca	ggtccacgca	atgcctcttg	tcatctggga	aatggatggc	ctggagctcg	180
tcaaacacac	tctgtgtatc	ttccacngca	gcctcctccg	aaqctccgg	gcagttgggg	240
gtgtcgtcac	actccactaa	actgtcgatn	cancagccca	ttgttgcagg	ggactctgggt	300
gggtcgacag	gtgccagaa	acactggatn	ggcctttcca	tgggaaggyu	tggggggaat	360
cncctnanc	caaacctgct	ctcaaaggcc	accttgcaaa	cccgacagg	ctaggaatgc	420
actctctctc	ccaaaggtag	ttgttcttgt	tgcacaagca	ncctccancc	nacccaaanc	480
ttgcaaaatc	tgttccgttg	gggtcatnna	taccannggt	ggggaanana	acccggcngn	540
ganccnccct	tttggaatgc	naaggnaata	atctctctgt	cttgccttgg	tgganagca	600
caattgaact	gttaacnttg	ggccnggttc	cncnnggttg	gtctgaaact	aatcacctgc	660
actggaanaa	ggtangtgcc	ttcttgaat	tcccaaanct	ccctngntc	tgggtntttc	720
ctctctncc	ctaaaaatcg	tnntccccc	ccttangggg			760

<210> 38

<211> 724

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> {1}...{724}

<223> n = A,T,C or G

<400> 38

tttttttttt	tttttttttt	tttttttttt	tttttaaaaa	ccccctccat	tgaatgaaaa	60
cttccnaaat	tgtccaaacc	cctcnnccaa	atnucatttt	ccgggggggg	gttccaaacc	120
caaatataat	ttggantttc	aattaaatnt	tnattngggg	anaaanccaa	atgtnaagaa	180
aatttaaccc	attatnaact	taaatnccct	gaaccctctg	gnttccaaaa	atttttaann	240
cttaaatccc	tcugaaattg	ntaanggaaa	accaaacttc	cctaaggctn	tttgaaggtt	300
ngatttaaac	ccccctnanc	tnntttnacc	cnnngctnaa	ncatttngnt	tccgggtgtt	360
tcc(nltaaa)	ctnnggtaac	tcccngtaat	gaanunccct	aanccaattc	aaacugaattt	420
tttttgaatt	ggaaactccn	nggggaattna	ccgggggttt	tccnttttgg	gggcatncc	480
ccctctttct	gggtttgggg	ntagggttgaa	ttttctnnang	nccaaaaaaa	ncctccanaa	540
aaaaaactcc	caagntttaa	ttngaatttc	ccccctccca	ggccttttgg	gaaggggggg	600

```

tttttggggg ccnggggantt ctttccccnn ttncncncnc ccccconggt aaanggttat    660
ngmntttggg ttttggggccc ctttncnggac cttccggatn gaaattaaal ccccgggncg    720
ggcg                                           724

```

```

<210> 39
<211> 751
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> (1) ... (751)
<223> n = A,T,C or G

```

```

<400> 39
tttttttttt tttttctttg cttcatttta atttttatct tgattttttt taatgctgca    60
caacacacata tttatttcat ttgtttcttt tatttcattt tatttgtttg ctgctgctgt    120
tttatittatt ttactgaaa gttggaggga aottttgttg ctttttttcc tttttctgta    180
ggcctgctta agctttctaa atttggaaac tctaagcaag ctgaanggaa aaggggggtt    240
cgcaaatca ctcgggggaa nggaagggtt gotttgtaa tcatgcctc tggctgggtga    300
tttaactgctt gtacattac ntttcacttt taattaatlg tgcnaangc ttttaattcne    360
cttgggggtt cctcccccnn accaaccnnc ctgacaaaaa gtgcncngcc ccaaatnatg    420
tcccggcnnt ctttgaaaac caungcngaa ngttctcatt ntcccccnc caggtnaaaa    480
tgagggggta ceatntttta cncacactcc acttggcnnn gcctgaatcc tcnnaaanen    540
cctcaanncn aattncbnnn ccccggtcnc gentongter cncgggggtt ccgggaantn    600
cacccccnga annnntnnc naacnaaatt cggaaatat tccnntcnc tcaattcccc    660
cnnagactnt cctcnnncnn cncaatttt ttttntcac gaacncgnnc cunnaaatgn    720
nnnnncncct cncnngtcnn naatcncnnc c                                           751

```

```

<210> 40
<211> 753
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> (1) ... (753)
<223> n = A,T,C or G

```

```

<400> 40
gtgggtatctt ctgtaagatc aggtgttccr cctctgtagg tttagaggaa acacccctcat    60
agatgaaaaac ccccccagaa cagcagcact gcaactgccr agcagccggg gtaggggggg    120
cgccctatgc acagctgggc ccttgagaca gcagggtctt gatgtcaggc tcatgtcaa    180
tggtctggaa gggcggtctg taactgcgta ggggcacacc gtcagggtcc accagggaat    240
tctcaaggtt ccaggcaacn tggltggac acaccggaga ccgggtgatn agcttggggg    300
cggtcataan cgggttggcg tggctgctgg gggctggcag ggctcccgcc aggaaggcna    360
ataaaagggtg cggcccgga cggttcancr cgcactcttc naunaccatg angltgggct    420
cnaaccacac accannccgg atttcttga nggaattccc aatctcttc gntcttgggc    480
ttctactgat gccctancct gttgcncngn atgccaancc nccccancc cgggggtccc    540
aaanaccccn cttctcncct tcatctgggt tnttntcccn ggacnltggt tctctcaag    600
gyancccata tctcnaccan tactcaccnt nccccccnt gnnaccancc cttctanngn    660
ttcccncgg nctcttggcc cntcaaannc gcttncacne cctgggtctg ccttcccccc    720
tacctatct gnacccnncn tttgtctcan tnt                                           753

```

```

<210> 41

```

<211> 341
 <212> DNA
 <213> Homo sapien

<400> 41
 actatatacca tacaacacag catgcttcat cccatagact tottgacata gcttcaaatg 60
 agtgaaccca tccctgcttt atatacatal atgttctcag tattctggga gcccttccac 120
 ttcttcaaac cttgttcttt atgaacactg aaaaatggga ttgtgaaga gttaaaagt 180
 tatagcclg ttaagttaga agtttctgaa gtctacattc aatccagaca cttagtctag 240
 tgttaaacctg tgatttttaa aaatatcat ttgagaatat tctttcagag gtattttcat 300
 ttttacttct tgaattattg tgtttctatc attagggtag t 341

<210> 42
 <211> 101
 <212> DNA
 <213> Homo sapien

<400> 42
 acttactgaa tttaqttctg tgcctctcc tatttagtgt tgtatccata atacttctat 60
 gtttcaaacca ttctaaataa ctcaatttca gtggcttcat a 101

<210> 43
 <211> 305
 <212> DNA
 <213> Homo sapien

<400> 43
 acatcttctgt cacagctctaa gatgtgtctc taactcacc tctcttcttg gtcttccccc 60
 tccagggctgg tctcacactg taatttagagc tattgaggag tctttacagc aatctagat 120
 ccagatgcct tgcctagctc agagttctag agttatgttt cagaaagctc aagaaaccca 180
 cctcttgaga ggtcagtaaa gaggaattaa tatttcatat ctacaaaatg accacaggat 240
 tggatacaga acgagagctt tctggataa ctcaagagctg agtaactgcc cggggggcgc 300
 t.cga 305

<210> 44
 <211> 852
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(852)
 <223> n = A,T,C or G

<400> 44
 acataaactat cagagaaaag tagtctttga atattttacg tccaggagtt ctttqttct 60
 gattattttg tgtgtgtttt ggtttgtgtc caaagtattg gcagctccag ttttcatctt 120
 ctctccatcc tggggcatcc ttcccaatt tatataccag tottcgtcca tccacacgt 180
 ccagaatttc totttttaga taatatctca tgcctgggtc gagcttttca taggtcatgc 240
 tgcgttgttt cttcttttta ccccatagct gagccactgc ctctgatttc aagaacctga 300
 agacgcctc agatcgggtc tcccaattta taatcctgg attcttgtct gggctcaga 360
 ggcgtgcgc gatgaattcc cataagtgag tccctctcgg gttgtgtctt ttggtgtggc 420
 acttgpcagc ggggtcttgc tcttttttca tatcaggfca ctctgcacaa ggaaggtgac 480
 tgggtggtgt catgagatc tgagcccgcc agaaagtatt gctgtccacc aaatctactg 540
 tgctaccata gttgggtgtc talcaatagt cctngtctct ccaggctgtc atgatggaag 600

gctcagtttg	ttcagtccttg	acaatgarat	tgtgltgtga	ctgggacagg	tcactactgc	660
actggccgll	ccacttcaga	tgtctgcaagt	tyctgtagag	gaagtcgcac	gccgtccctg	720
ccgcucgggt	gaactcctgc	aaatcatgc	tgcacaggtg	ctcgccgttg	atgtcgaaat	780
cntggaaagg	gatacaattg	gcattccagct	ggttggtgtc	caggaggtga	tggagccact	840
ccacacctg	gt					852

<210> 45

<211> 234

<212> DNA

<213> Homo sapien

<400> 45

acacacagacc	cttgcctgct	aacgacctca	tgtctatcaa	gttggacgaa	tccgtgtccg	60
agtctgacac	catcgggagc	atcagcattg	cttcgcagtg	ccctaccgag	gggaaactct	120
gcctcgtttc	tggctggggt	ctactggcga	acggcagaat	gcctaccgtg	ctgcagtgcc	180
tgaacgtgtc	ggtggtgtct	gaggaggctct	gcagtaagct	ctatgacccg	ctgc	234

<210> 46

<211> 590

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(590)

<223> n = A,T,C or G

<400> 46

acattttatt	taaatgttta	taaggcagat	ctatgagaat	galagaaaac	atgggtgtgt	60
atttggatagc	aatatttttg	agattacaga	gttttagtaa	ctaccaatta	cacagttaaa	120
agagagataa	tatcttccaa	gcnatacaa	aatatctaat	gaagagatca	ggcaggaaaa	180
tgaatataac	taattgacaa	tggaaaatca	attttaatgt	gaattgcaca	ttatcrttta	240
aaagctttca	aaanaaenaa	ttattgcagt	ctanttaatt	caaacagtyt	taaattggat	300
caggataaen	aaactgaagg	canaaagant	taattttcac	ttcctgtaac	ncacccanac	360
ltacaaatggc	ttaaatgcac	ggaaaagca	gtggaaagtag	ggaagtaato	aaggtcttct	420
tggctctctaa	ctcgccttac	tccttgggtg	tggctttgat	cctctggaga	cagctgccag	480
ggctcctgtt	atatccacaa	tcccgcagc	aaagatgaag	gatgaaaagg	gacacatgct	540
gccttccctt	gaggagactt	catctcactg	gcacacactc	agtcacatgt		590

<210> 47

<211> 774

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(774)

<223> n = A,T,C or G

<400> 47

acaaagggggc	ataatgaaag	agtggggana	galctttaaag	aagggaadaa	aacgaggccc	60
tgaacagaaat	tttccctgnac	aacgggggctt	caaaataaatt	ttcttgggga	ggttcaagac	120
gcttcactgc	ttgaacctta	aatggatgtg	ggacannatt	ttctgtaatg	accctgaggg	180
cattacagac	gggactctgg	gaggaaaggt	aaacagaaag	gggacaaagg	ctaatcccaa	240
aaatccaaag	aaaggaaagg	gggtgcatac	ctccaaagct	acacagttct	ccagggtctct	300


```

cctcatcccl: ggaaggacgac agtggaggga caactgacca tgtcccacgg cccctgltgt 360
ctgggtcctg gtcttcagcc cccagctctg gaagccacc ctctgtgat cctgcgtggc 420
ccacactccl: tgaacacaca tcccaggtl ctcttcctgg acatggctga acctcctall 480
cctacttcgg agatgcttg ctccctgcag cctgtcaaaa tcccaactac cctccaaacc 540
acggcatggg aagcctttct gacttgcttg altacttcag catcttggaa caatccctga 600
ttcccactc cttagaggca agatagggtg gtaagagta gggutggacc acttggagcc 660
aggtgtctgg cttcaaatc ttgctcatct acgagctatg ggaccttggg caagtactct 720
tcacttctat gggctcact tcttctacc tgcaaatgg gggataataa tagt 774

```

```

<210> 48
<211> 124
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> {1}...{124}
<223> n = A,T,C or G

```

```

<400> 48
cnaaattga aattttataa aaaggcattt tctctctata tccataaaa. gttataattt 60
ttgcaantat aaaaatgtgt cacaatttat aatgttcctt aal.lacagct caacgcaact 120
tggt 124

```

```

<210> 49
<211> 147
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> {1}...{147}
<223> n = A,T,C or G

```

```

<400> 49
gocgatgcta ctatcttall ggaagggtg ggggtgttct tattattctc tcaucagctt 60
tgtggctaca ggtgggtgtc gactgcata aaaaattttc tccgggtgat tgcaaaaatt 120
ttagggcacc catatcccaa gcaatgt 147

```

```

<210> 50
<211> 107
<212> DNA
<213> Homo sapien

```

```

<400> 50
acattaatc aataazagga ctgttcgggtc tctgctaaaa caacgggtc gatatttgc 60
atgggtttag gtaaggagg gtaaggcata tgttcttggg gaggggt. 107

```

```

<210> 51
<211> 204
<212> DNA
<213> Homo sapien

```

```

<400> 51
gtcctaggga gtctagggga cacacgactc tgggttcacg gggcgcacac acttgcacgy 60

```

```

cgggaaggaa aggcagagaa gtagacacgt caggggggaa tgcacgaaag gaaatcaag 120
gccttgcaag gtagagaaag ggactcaggg ctccaccac agccctgccc caattggcc 180
ctccctttt gggaccagca atgt 204

```

```

<210> 52
<211> 491
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> (1)...(491)
<223> n = A,T,C or G

```

```

<400> 52
acaaagataa cctttatctt ataacaanaa ttgcatagtt ttaaaggcta gtattgtgta 60
gggtattttt cnaagacta aagagataac tcaggtaaaa agttagaat gtataaaca 120
ccatcagaca gggttttaaa aaacaacata ttagcaaat agacaatcat cttaaaaaa 180
aaaaactctt gtatcaattt ctttctttta aatgactga cttaattatt tttaaatatt 240
tcnaaaacac tctctcaaaa attttcaana tggtagcttt canatgtnc ctcagtccc 300
atgttgcttc gctaaataaa tctcgtgaga acttaccac caccacaagc ttctctgggc 360
atgcaacagt gtcttttctt tttttttct tttcttttt ttacaggcac agaaactcat 420
caattttatt tggataacaa agggctctca atttatattg aaaaataat ccaagtcat 480
atcaatcttg t 491

```

```

<210> 53
<211> 484
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> (1)...(484)
<223> n = A,T,C or G

```

```

<400> 53
acataattta gcagggtctt ttauccataag atgctattta ttaanaggtn tatgatctga 60
gtattaarag ttgctgaagt ttggtatttt catgcagcat ttctcttttg ctttgataac 120
actacagaac ctttaaggac actgaatatt agtaagttaa gttcagaaac attagctgct 180
caatcaaatc tctacataac actatagtaa ttaanncggt aaaaaaagt gttgaatatc 240
gcactagtat anaccgctcc tgcaggata anactgctt ggaacagaaa gggcaaaanc 300
agccttgank ttctttgtgc tgarangagy aaaggctgaa ttaacttggt gcctctccct 360
aatgattggc aggtcnggtt aatnccaaa catatccaa ctcaacactt cttttccncc 420
tancctganc ctgtgtattc caggandagg cggatggaat gggccagccc ccggaatctc 480
cant 484

```

```

<210> 54
<211> 151
<212> DNA
<213> Homo sapien

```

```

<400> 54
actaaacttc gtgcttgta actccataca gaaanaggty ccatccctga acacggctgg 60
ccactgggtt taactgtgac aacrgcaac acnaaaacac aatcccttgg cactggctga 120
tctatgtcct ctcaagtgc tttttgtttg t 151

```

<210> 55
 <211> 91
 <212> DNA
 <213> Homo sapien

<400> 55
 acctggcttg tctccgggtg gtccccggcg ccccccacgg tcccagAAC ggacacttcc 60
 gccctccagt ggatartcga gcaaaagtgg t 91

<210> 56
 <211> 133
 <212> DNA
 <213> Homo sapien

<400> 56
 ggccggatgtg cgttggttat atacaaatat gtcatttlat gtaagggact tgagtatact 60
 tggatttttg gtatctgtgg gtccggggga cggctcagga accaataacc catggatacc 120
 aagggaAAC tgt 133

<210> 57
 <211> 147
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(147)
 <223> n = A,T,C or G

<400> 57
 accttgagga acctgagccg ctgctccgcc tutgggatga ggtgatgcan gngtggcgc 60
 gactgggagc tgagcccttc ccttgggcc tgcctcagag gattgttggc gaontgcana 120
 tctcantggg ctggatncat gcagggt. 147

<210> 58
 <211> 198
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(198)
 <223> n = A,T,C or G

<400> 58
 acagggatat aggtttnaag ttattgttat tgcataatan attgaatttt ctgtatactc 60
 tgattacata catctatcct tcaaaaaga tgcatactt aatttttatg ccacttatte 120
 attacaaat gaggtaacct gtaaatgaga agtcataata gcactgaatt tcaactagtt 180
 ttgacttcta agtttgggt 198

<210> 59
 <211> 330
 <212> DNA
 <213> Homo sapien

<400> 59

acacacacatg	ggttctgagg	agctctttatc	agcaaaacga	gtgatggcta	ctgaaaagat	60
ccattgaaaa	ttatcattaa	tgatttttaa	tgacaggtta	tcaaaaaatc	actcaatttt	120
cacctgtgct	agcttgctaa	aalgggggtt	aactctagag	caaatatagt	atctttctgaa	180
tacagtcaat	aaatgacaaa	gccagggcct	acaggtgggt	tcagagcttt	ccagacuuag	240
cagaggguat	ctattttatc	acatggatct	cgtctgtgac	tcaaaatacc	caatgatatt	300
tttctctctt	atlggacttc	tttgaagagt				330

<210> 60

<211> 175

<212> DNA

<213> Homo sapien

<400> 60

acagtgggtg	ccttctacat	tcttgacggc	tccttcacca	acatctgggt	ctacttcggc	60
gtcgtgggt	ccttctcttt	catctccatc	cagctggctg	tgctcatcga	ctttgcgcac	120
tcttggaacc	agcgggtggt	gggcaaggcc	gagggagtgcg	attccctgtc	ctggc	175

<210> 61

<211> 154

<212> DNA

<213> Homo sapien

<400> 61

acccacattt	tcttctgtg	agcgtctgg	acttctcaat	gctacatgat	gaggggtgagt	60
ggttgttctt	cttcaacagt	atcttccctt	ttccggatct	gctgagcagg	acagcagtagc	120
tggactgcac	agccccgggg	ctccacattg	ctgt			154

<210> 62

<211> 30

<212> DNA

<213> Homo sapien

<400> 62

cgtctgagcc	ctatagttag	tgtattaga				30
------------	------------	-----------	--	--	--	----

<210> 63

<211> 89

<212> DNA

<213> Homo sapien

<400> 63

acaagtcaat	tcagacacct	ttgcctctca	aaatgacca	tctttttatat	ttaatgcttc	60
ctgtatgaat	aaaaatggtt	atgtcaagt				89

<210> 64

<211> 97

<212> DNA

<213> Homo sapien

<400> 64

accggagtaa	ctgagtgggg	acgctgaatc	tgaatccacc	aataaataaa	pyttctgcag	60
aatcagtgca	ccagggattg	gtccttgggc	ctggggg			97

<210> 65
 <211> 377
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)... (377)
 <223> n = A,T,C or G

<400> 65
 acaacaanaa nt.ccccttctt taggcccactg atgggaaacct ggaaccccctt tttgatggca 60
 gcctggcgctc ctaggcccttg acacagcggc tgggggtttgg gctntcccaa accgcacacc 120
 ccaacccctgg tctaccccaca ntctctggcta tgggctgtct ctgcractga acatcagggt 180
 tccgglcataa natgaaatcc caanggggac agaggtcagt agagggaagt caatgagaaa 240
 ggtgctgttt gctcagccag aaaaacagctg cctgguatte ggcgctgaa tatgaacccg 300
 tgggggtgaa ctaccccccag gagggaatcat gcttggggcga tgcxaanggtg ccaacaggag 360
 gggcgggagg agcatgt 377

<210> 66
 <211> 305
 <212> DNA
 <213> Homo sapien

<400> 66
 acgccttttc ctccagaattc agggaaagaga ctgtcgccctg ccttctctcgg ttgttgcggtg 60
 agaacccctg tgcaccttcc caacatatac accctcgctc catctctgaa ctcaaacang 120
 aggaartcac tgcacctgg tctctctccc agtccccagt tcaacctcca tccctcacc 180
 tctctcactc taagggtatc caacactgcc cagcacaggg gacctgaatc tatgtgggtt 240
 ctatatattt tttaataaga tgcacttlat gtcatttttt aatcaggtct gaagaattac 300
 tgttt 305

<210> 67
 <211> 385
 <212> DNA
 <213> Homo sapien

<400> 67
 actacacaca ctccacttgc cctctgtgaga cacttttgtcc cagcacttta ggaatgctga 60
 ggtcggacca gccacatctc atgtgcaaga ttgcccagca gacatcaggt ctgagagttc 120
 ccccttttaa aaaggggact tgettaaaaa agaagtcctag ccacgattgt gtgagcagc 180
 tgtgctgtgc tggagattca cttttgagag agttctcttc tgggacctga tctttagagg 240
 ctgggcagtc ttgcacatga gatggggctg gtctgatctc agcaactcctt agtctgcttg 300
 cctctccccc ggcaccagcc tggccacac tgettacagg gcaactctcag atgcccatc 360
 catagtttct gtgctagtgg accgt 385

<210> 68
 <211> 73
 <212> DNA
 <213> Homo sapien

<400> 68
 acttcauccg atacattttt accuucagatg gggatcttct ttgtaaaaaa tcaaaaataa 60
 gtttttttaa tgg 73

<210> 69
 <211> 536
 <212> DNA
 <213> Homo sapien

 <220>
 <221> misc_feature
 <222> (1)...(536)
 <223> n = A,T,C or G

<400> 69
 actagtcacag tgtgggtggaa ttccattgtg ttggggggctc tcacctctct ctccctgcagc 60
 tccagctttg tgcctctgct ctgaggagac catggcccag catctyagta cccctgctgct 120
 cctgctggcc accctagctg tggcctctggc ctggagccuc aaggaggagg ataggataat 180
 cccgggtggc alctataacg cagacntcaa tcatgagtggt gtacaycgtg ccccttcaact 240
 cyccctcagc gagtataaca aggcacccaa agatgactac tccagacgtc cyctgrrgggt 300
 actaagagcc aggcacacag ccgttgggggg agtgaattac ttcctcyacg tagaggttggg 360
 ccgacccata tgtaccaagt cccagcccaa cttgggacac tgtgcttcc atgaacagcc 420
 agaactgcag aagaaccagt tgtgctcttc cagatctac gaagttccct ggggagacaa 480
 gaangtccct gggtgaaatc caggtgtcaa gaaatctctt ggatctgttg ccaggc 536

<210> 70
 <211> 477
 <212> DNA
 <213> Homo sapien
 <400> 70

atgaccccta acaggggccc tctcagccct cctaattgac tcgggtctag cctgtgtgatt 60
 teacttccac tccatcaagg tcttcatact aggcctacta accaagacac taccatata 120
 ccacagatgg ccgctgttaa caggagaaag cacataccac ggcacccaca caccacotgt 180
 ccacaaaggc cttcgatagc ggataatccc atttattacn tcagaagtlt tttctctcgc 240
 agggcttttt ctaggccttt taccactcca gcttagcccc taccucccaa ctgggggggc 300
 actggccccc aacaggcctc ccccccgtaa atccccctaga agtcccactc ctacacacat 360
 ccgattactc cyctcagga gtatcaatca cctgagctca ccatagtcta atagaaacca 420
 accgaaccca aattattcaa agcactgctt attacaattt tactgggtct ctatttt 477

<210> 71
 <211> 533
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(533)
 <223> n = A,T,C or G

<400> 71
 agagctatag gtacagtgtg atctcagctt tgcacacaca ttttctacac agutagtact 60
 aggtattaat agatatgtaa agaaagaaat cacaccatta ataatggtaa galtaggtta 120
 tgtgatttta gtggtatctt tggcaccctt atctatgttt tcccaacttt cagcagtgat 180
 attatttcca taacttaaaa agttaggttg aaaaagaaaa tctccagcaa gontctcatt 240
 taaataaagg tttgtcatct ttaaaaatcc agcaatattg gactttttat aaaagctgtc 300
 aaatgggtgt gacactccta atcaattatta gaalacatt taasaanac ggtacctca 360
 agtcagtttg ccttgaaaaa tatcaaatat aactcttaga ghaatgtaca taagaantg 420
 ctctgttaatt ttggagtang aggttccctc ctcaactttg tatcttcaa aagtacatgg 480
 taaaaaaaga aattcacac agtatataag gctgtaaaat gaaagattct gcc 533

<210> 72
 <211> 511
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(511)
 <223> n = A,T,C or G

<400> 72
 tal:taaggaa aacacaccca cataattcaa claucaaaaga anactgcttc agggcggtgta 60
 aatgaaagg cttccaggca gttatctgat taaagaacac taanagaggg acaaggctaa 120
 aagcggcagg atgtctacac tatancaggc gctatttggg ttggctggay gacctgtgga 180
 aacratggan agatgggtgc tgganacgc cgtggctatc ctcatttgtt atfacanagt 240
 gaggttcctt gtgtgccac tggtttgaan accgttctnc aataatgala gantagtagc 300
 cacatgagaa ctgaaatggc ccaaacccag aagaaagcc caatagatc ctcaagaaac 360
 gcttctaggg acataaccg atgaagaaaa galggcctcc ttgtgcccc gtctgttatg 420
 atttctctcc attgtagcna naaacccgtt cttctaagca aacnucggtg atgatggcna 480
 aatacaacc cctcttgag nacnngagg a 511

<210> 73
 <211> 499
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(499)
 <223> n = A,T,C or G

<400> 73
 cagtgcacgc actggtagca gtaccagtag caataacagc gacagtgcga gtgcacagac 60
 cagtggtggc ttcaagtgtg gtgccagcct gacggcact ctacatcttg ggcctcttgc 120
 tggccttggg ggagccagtg ccagccaccg tggcagctct ggtgactgtg gttctctcta 180
 caagtgaagt tttagatatt gtaatcctg ccagtcttcc tcttcaagcc aggggtgcac 240
 ctcagaaacc tactcaaac agcaactctag gcagccacta ccaatcaatt gaagttgaca 300
 ctctgcatta aatctatttg caatttctga aaaaaaana aaaaaaggg cggcrgctcg 360
 antctagagg gcccgcttaa acccgctgat cagcctcgac tgtgccttct anttgcacgc 420
 catctgttgt ttgccctcc ccgntgcct tcttgacc cggaaagtgc cactccact 480
 gtccttctct aantaaat 499

<210> 74
 <211> 537
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(537)
 <223> n = A,T,C or G

<400> 74
 tttcataggg gaacacactg aggagatacl thangaattt ggaatccagcc gcaagagat. 60

```

ttatcagctt: aactcngata aatcattga aagtaataag gtaaaagcta gtctctaact 120
tccagggcca cggctcaagt gaatttgaat actgcattta cagtgtagag taacacutaa 180
cat.tgtatgc atggaaadct ggaggaanag taltaavgtg tectaccact ctatcaaga 240
aaagattac agactctgat tctacagtga tgattgaatt claaaaatgg taatcattag 300
ggcttttgat ttataaact ttgggtactt atactaatt atggtagtth tactgcttr 360
cagtttgott gatataattg ttgatattaa gattcttgac ctatattttg aatgggttct 420
actgaaaaan gaatgatata ttcttgaaga cctcgaataa catttattth cactcttgat 480
tutacantgt agaaatgaa ggaatggcc caaattgtat ggtgatataa gtcccg 537

```

```

<210> 75
<211> 467
<212> DNA
<213> Homo sapien

```

```

<220>
<221> misc_feature
<222> (1)...(467)
<223> n = A,T,C or G

```

```

<400> 75
caaanacaat tgttcaaaag atgcnaatga taactacttg ctgragctca caaacacctc 60
tgcatactac acgtacctcc tctgtctct caagtagtgt ggtctatctt gccatcacta 120
cctgctgtct gcttagaaga acggtctct gctgcaangy agagaaatca taacagacgg 180
tggcacaagg aggcctctct tctctcatcg gttattgtcc ctagaagcgt ctcttgagga 240
tctagttggg cttctcttct ggggttgggc catttcanll ctcatgtgtg tactattcta 300
tcattattgt ataacggtt tcnaaccngt gggcaencag agaacctcac tctgtaataa 360
caatggagga tagccarggt gatctccagc accaaatctc ccuatgttnt tccagagctc 420
ctccagccaa cccaaatagc cgtctctatn gtgtggaaca tccctgn 467

```

```

<210> 76
<211> 400
<212> DNA
<213> Homo sapien

```

```

<220>
<221> misc_feature
<222> (1)...(400)
<223> n = A,T,C or G

```

```

<400> 76
aagctgacag cattcgggcc gagatgtctc gctccgtggc cttagctgtg ctgcgctac 60
tctctcttct tggcctggag actatocagc gtactccaaa gattcaggtt tactcaagtc 120
atccagcaga gaattggnaag tcaaatctcc tgaattgcta tglgtctggg ttctatccct 180
ccgacattga agttgactta ctgaagaatg gagagagaaat tgaaaaagtg gaggattcag 240
acttgtctt cagcaaggac tggctcttct atctcttgtc ctacactgaa ttacccccc 300
ctgaaaaaga tgaatatgac tgcctgtgga acuatgtgac ttgtgtccag ccaagatng 360
tttagtggga teganacatg taagucagcan catggggaggt 400

```

```

<210> 77
<211> 248
<212> DNA
<213> Homo sapien

```

```

<400> 77
ctggagtgnr ttggtgttct .aagccctgcr aggnagcaga atgcaccttc ttaggcacct 60

```


ccagctgccc	cgccggggga	tgcggggctc	ggagcaccct	cgcccgggctg	tgattgctgc	120
caggcactgt	tccatctcagc	ttttctgtcc	ctttgctccc	ggcaagcgc	cttgcctgaaa	180
gttccatctc	ggagcctgat	gtcttccagc	ataaaggctc	catgctccac	ccgaaaccaa	240
aaaaaaaa						248

<210> 78
 <211> 201
 <212> DNA
 <213> Homo sapien

<400> 78	
actagtcacag	tgtaggtgga
tcacccagac	ccgcctctgc
tctgctactc	ggaaacctct
gatttcacaa	aaacacacaa
	a
	60
	120
	180
	201

<210> 79
 <211> 552
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1) ... (552)
 <223> n = A, T, C or G

<400> 79	
tctcttctgt	aggtttttga
tttaggcagt	gctagtcctc
cctcttctct	ctgaagatta
tgtgatagta	taagtatctc
atgcaagctc	gtacttactc
ctgttccctg	gctagaaaaa
taatatctca	tgttctaaaa
ttcccaaggc	tatggggctc
cngttttggc	taatacgtta
aaacacacaa	aa
	60
	120
	180
	240
	300
	360
	420
	480
	540
	552

<210> 80
 <211> 476
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1) ... (476)
 <223> n = A, T, C or G

<400> 80	
acagggatct	ggatgcttan
ggggacacat	gggcctagaa
caracagatc	cccgagtagc
gcatttcacg	ttgccacctc
aggttaaac	ttccacccca
tcttctaaat	cctcttccag
	60
	120
	180
	240
	300
	360

tcttgggtttt ctcaataaaa tctctatccc tctcatgttt aatttgggttc gcntaaaaat 420
 gctgnaaaaa ttaaatgtt clggttttccc tttaaaaaaa adaaaaaaa aaaaaa 476

<210> 81
 <211> 232
 <212> DNA
 <213> Homo sapien
 <220>
 <221> misc_feature
 <222> (1)... (232)
 <223> n = A,T,C or G

<400> 81
 tttttttttg tatgcctctn ctgtggngtt attgttgcctg ccacccctgga ggagcccagt 60
 ttctctctga tctttctttt ctgggggato ttcctggctc tgvccctcra ttccagacct 120
 ctcatcccca tcttgcatt ttgttagggg tggagggcgt ttcctggtag vccctcagag 180
 ctccagtcag cgggaataag tccctaggggt ggggggtgtg gcaagccggc ct 232

<210> 82
 <211> 383
 <212> DNA
 <213> Homo sapien
 <220>
 <221> misc_feature
 <222> (1)... (383)
 <223> n = A,T,C or G

<400> 82
 aggcggggagc agagctaaa gccaaagccr aggaagagtg gcagtgcag cactgggtgc 60
 agtaccagta ccaataacat gcccagtcca gtgcccagca cagtgggtgg ttccagtgcgt 120
 gtgcccagct gacccgcact ctacacattg ggtctctcgc tggcctcggg ggagctgggtg 180
 ccagcaccag tggcagctct ggtgcctgtg gttctccta ccagtggagat tttagatatt 240
 gttaatctg ccactcttcc tttcaagcc aggtgcate ctcaaaacc tactcaacac 300
 agaacctctg gcagcacta tcaatcaatt gaagtgcaca ctctgcatta aatctatttg 360
 ccatttcana aaaaaaaa aaa 383

<210> 83
 <211> 494
 <212> DNA
 <213> Homo sapien
 <220>
 <221> misc_feature
 <222> (1)... (494)
 <223> n = A,T,C or G

<400> 83
 accgaatttg gaccgctggc ttatagcga tcatgtctc cagtattacc tcaacgaaga 60
 gggagatcga gtctatacgc tgaagaaatl tgaucgatg ggacaacaga cctgctcagc 120
 ccctcctgct cggttctccc cagatgaca atactctcga caccgaatca ccatcaagaa 180
 acgcttcaag gtgtctatga ccagcaacc ggcgcctgtc ctctgggggt ccttaaaactg 240
 atgtcttttc tgcacactgt taccctctgg agactccgta acccaactct tgggactgtg 300
 agccctgatg cctttttgct agccatctc tttggontcc agtctctcgt ggcgattgat 360

catgcttctg	tyaggcaatc	atgggtggca	caccatnaa	gggaacacal	ttgatttttt	420
tttencatat	tttaaatlac	naccayaatc	nttragaate	aatgaattga	aaaactctta	480
aaaaa	aaan					494

<210> 84
 <211> 380
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1) ... (380)
 <223> n = A,T,C or G

gctggtagcc	tatggcgtgg	cacaggaagg	gctcctgagg	cacgggacag	tgactcccca	60
agtatcctgc	gcacgctctt	ctaccgtccc	tacctgcaga	tcttggggca	gatterccag	120
gaggaacatg	acgtggccct	catggaagac	agcaactgct	cgtcggagcc	cggcttctgg	180
gcacaccctc	ctgggggcca	ggcggggcgc	tgcgtctccc	agtatgcac	ctggctgggt	240
gtgctgctcc	tcttcattct	cctgctcgtg	gccaacatcc	tgcttgctcc	ttgctccttg	300
ccatgttcag	ttacacattc	ggcgaagtac	aggggcaacg	cnatctctac	tgggaaggcc	360
agcgttccgc	cctcattcgg					380

<210> 85
 <211> 481
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1) ... (481)
 <223> n = A,T,C or G

gagttagctc	ctccacaccc	ttgatgaggt	cgtctgcagt	ggcctctcgc	ttcataccgc	60
tnccatcgtc	atactgtagg	tttggccaca	cctcctgcac	cttggggcgg	ctaataccca	120
ggaaactctc	aatcaagtc	cctcctatna	aacctgtggc	tggctctgtc	ttccgtcctg	180
tgtgaaagga	tctccagag	gagtgctcga	tcttcccca	acttttgatg	actttattga	240
gtcgtatctg	catgtccagc	aggaggttgt	accagctctc	tgacagtgay	gtcaccagcc	300
ctatcatgcr	nttgaacgtg	cgaagaaaca	ccgagccttg	tgtggggggg	gnagtctcac	360
ccagcttctg	cattaccaga	nagccgtggc	aaaaganatt	gacacctcgc	ccaggngaga	420
aaagaacacc	tcttggaggt	gctngccgct	cctcgtcctt	tgggtggngc	gccttctctt	480
t						481

<210> 86
 <211> 472
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1) ... (472)
 <223> n = A,T,C or G

<400> 86

```

aacatcttcc tgtataatgc tgtgtaatat cgatccgcatn ttgtctgctg agaatccatt      60
atttggaaaa gaaacttnaa gactggacac tggatattaaa attcacaala tgaacactt      120
taaacagtgt gtaaalctgc tcccttactt tgtcatcacg agtctgggaa taagggtatg      180
cctctattcc accgtttaaa agggcgclaa gcatttttga ttcaacatct tttttttga      240
cacaagtcag aaaaagcaca aagtaaacag ttnttaattl gttagccaat tcactttctt      300
catgggtacg agccatttga tttaaaaagc aatttgcata atattgagcl ttgggagctg      360
atatntgagc ggaagantag cttttctact taccagaca caactccttt catattggga      420
tgttuacnaa agtcattgtct cttacagatg ggtatgtttt gtggcaattc tg      472

```

<210> 87
 <211> 413
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(413)
 <223> n = A,T,C or G

```

<400> 87
agaaaccagt atctctnaaa acaacccctc atacccttgtg gactataattt tgtgtgcgtg      60
tgtgtgtgag cgcataattat atagacaggc acatcttttt tacttttcta aaagcttatg      120
cctcttttgg atctatatct gtgaaaattt taatgatctg ccatatgttc ttggggacct      180
ttgtctttct tgtaaatggt actagagaaa acactctatc tatgagtcac tctagttngt      240
tttattcgac atgaaggaaa tttccagatn acaaacctna caaactctcc cttagactagg      300
ggggacaaag aaaaagcana ctgaacatna gaaacaattt cctgggtgaga aatttcataa      360
acagaacttg ggtngtatat tgaaanang catcattnaa acgttttttt ttc      413

```

<210> 88
 <211> 448
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(448)
 <223> n = A,T,C or G

```

<400> 88
cgcagcgggt cctctctatc tagctccagc ctctcgcttg ccccactccc cgcgtccgc      60
gtcctagccn accatggcgg ggcctctggc cgcctcgctg ctctgctgg ccacccggc      120
cgtggccctg gccgtggagc cgcgggcccg ctccagtcct ggcaagccgc cgcgcctgg      180
gggaggccca tggaccctgc gtggaagaag aagggtgtgc gcgtgcactg gactttgccc      240
tggcnanta caacaaaccr gcaacnactt ttacnagcn cgcgtgacg gttgtgcgc      300
cccaanccaa ttgttactng gggtaantaa ttcttggag ttgaacctgg gccaaacng      360
tttaccagaa ccaagcccat tngaacaatt nccctccat aacagccct tttaaaaag      420
gaanvanteo tgnctctttc caaatttt

```

<210> 89
 <211> 463
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature

<222> (1) ... (463)

<223> n = A,T,C or G

<400> 89

gaattttgtg	cactggccac	tgtgatggaa	ccattgggccc	aggttgcctt	gagtttlatca	60
gtagtgttcc	tgcacaggtt	ggtgttctaa	cabtggtatg	taaaatgtca	aaaaattagc	120
agaggtctag	gtctgcatat	caagcagacag	tttgtctgtg	tattttgtag	ccctggaagt	180
ctcagtgaca	agtttmttct	gatgcgaagt	tcnattcca	gtgtttttagt	cccttgcctc	240
tttnatgttn	agacttgcct	ctntnaaatt	gccttttgtnt	tctgcaggta	ctatctcttg	300
tttaacaaaa	tagaannact	tctctgcttn	gaanatttga	atacttaca	tcnnaaaatn	360
aattctctcc	ccatannaaa	acccagccccc	ttgggaanaat	ttgnaaaang	gntccttctn	420
aattcnnana	anttcagntn	tcatacaaca	naavngganc	ccc		463

<210> 90

<211> 400

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1) ... (400)

<223> n = A,T,C or G

<400> 90

agggattgaa	ggtctnttnt	actgtcggac	tgttcncca	ccaactctad	aagttgctgt	60
cttccartca	ctgtctgtaa	gcntnttaac	ccagactgtc	tcttctataa	tagaacaact	120
tcttcaccag	ccacatcttc	taggaccttt	ctggattcag	ttaghtataa	ctcttccact	180
tcctttgtta	agacttcctc	tggtaaaagt	ctaagttttg	tggaaaggaa	tttaatttgt	240
cgttctctaa	caatgtcttc	tccttgaagt	atttggctga	acaaaccacc	tnaagttcct	300
ttgtgcctcc	attttaaata	cacttaaatag	ggcatttggt	cactaggtta	aattctgtca	360
gagtcctctg	cttgcaaaaag	ctgcgttagt	atatctgtcc			400

<210> 91

<211> 480

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1) ... (480)

<223> n = A,T,C or G

<400> 91

gagctoggat	ccaataatct	ttgtctgagg	gcagcacaca	tatncagtgc	catggnaact	60
ggtctacccc	acatgggagc	agcatgccgt	agntatataa	ggtcattccc	tgggtcagac	120
atgcctcttt	gactacccgt	tgcacgtgct	ggtgatcttc	acacacctcc	nnccgctctt	180
tgtggaaaaa	ctggcacttg	ncctggaaact	gcaagacatc	acttacaact	tcacccacga	240
garactttaa	aggtcttaaa	aagcgactct	tgcattgctt	tttgtccctc	cggcaccagt	300
tytcaatact	aacccgctgg	tttgcctcca	tcacatttgt	gactctgtagc	tcaggataca	360
tcttctgccc	gtactgaaga	acttcttctt	ttgtttcaaa	agcaactctt	ggtgctgtt	420
ngatcaggtt	cccatttccc	agtcggaatg	ttcacatggc	atatnttact	tcccacaaaa	480

<210> 92

<211> 477

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(477)

<223> n = A,T,C or G

<400> 92

atauagccca	natcccacca	ogaagatgag	cttggtgact	gagaacctga	cgcggtcaat	60
ggctccgctg	tgcgccagc	gactctccac	ctgctggag	cggttgatgc	tgcaactcctt	120
cccaagcagg	cagcagcagg	gcgggtcaat	gaactccact	cgtgggttgg	ggcttgacggg	180
taantgcagg	aaagggctga	ccacctggcg	gtccaccagg	atgcccgaat	gtgcgggagc	240
tgcagcgaaa	ctcctcgatg	gtcatgagcg	ggagcgcaat	gagcccgagg	gccttcgccc	300
gaaccttcgg	cctgttctct	ggcgccacct	gcagctgctg	ccgctnacac	tgggctcgg	360
acccagggag	aaacggcgtt	gaacagcgcg	acctccagg	tgccantgt	gtngcgtcc	420
aggaacggcg	ccagcgtgtc	caggtcaatg	tgggtgaanc	ctccgcggtg	aattggcg	477

<210> 93

<211> 377

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(377)

<223> n = A,T,C or G

<400> 93

gaacggctgg	acctggucc	gcattgcgct	gtcggcagga	ataccttggc	aagcagctcc	60
agtccgagca	gccccagacc	gctgcggccc	gaagctaaac	ctgcctctgg	ccttcacctc	120
cgctcaatg	cagaaccant	agtgaggagca	ctgtgtttag	agctaaagag	gaacactgtc	180
tgatttlaet	tgggaatttc	ctctgtttata	tagcttttcc	caatgctaat	ttccaaaaca	240
caacacaaa	ataacatgtt	tgccgtgtta	gttgtataaa	agtangtgat	tctgtatnta	300
aagaaaatcl	tactgttaca	tatactgott	gcaanttctg	tatttatagg	tnctctggaa	360
ataantatat	tattaaa					377

<210> 94

<211> 495

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(495)

<223> n = A,T,C or G

<400> 94

ccctttgagg	ggctagggtc	cagttccag	tggaagaaac	aggtccaggag	aantgcgtgc	60
cgagctgag	cagatttccc	acagtgaccn	caggagccctg	ggctalagtc	tctgacctct	120
ccaaggaaag	accaccttct	ggggacatgg	gctggagggc	aggacctaga	ggvaccaagg	180
gaaygcacca	ttcgggggct	gttcccgag	gaggaaggga	aggggctctg	tgtgcccccc	240
acgaggaana	ggccctgant	ctcgggatac	nacacctctc	caegtgtatc	ccacacacaa	300
tguaagctca	ccagggtccc	ctctcagttc	cttccctaca	ccctgaacgg	ncactggccc	360
acacccaccr	agancancca	cccgcctatg	ggaatglnct	caagggaatcg	ungggcaacg	420
tgaauctctg	ttccnnaaag	gggcagaatc	tcvaatagan	gganogazcc	cttgcctana	480

#####

495

<210> 95
 <211> 472
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> {1}... (472)
 <223> n = A,T,C or G

<400> 95
 gggtacttgg tttcattgac accacttagt ggatgtcatt tagaaccatt ttgtctgctc 60
 cctctggagg ccttgcgcag agcggacttt gtaatttctg gagaatcaact gctgaatttt 120
 tagctgtttt gaggtcattc gcaccactgt accacaactc aatattgaaa ctatttact 180
 tattttattt cttgtgaaaa gtatacaatg aaatttttgc tcatactgta ttatcaagt 240
 atgatgaaa gcaatagata tatattcttt tattatgttn aattatgatt gccattatta 300
 atcggcagaa tgtggagtgt atgtttcttt cacagtaata tatgcctttt gtaacttcac 360
 ttgtttattt tatcgttaat gatttacaaa attcttaatt caagaaatg gtanattata 420
 ttanttcacn taatttcttt cttgtttac gtaatttttg aaagaatgc at 472

<210> 96
 <211> 476
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> {1}... (476)
 <223> n = A,T,C or G

<400> 96
 ctgaagcatt tcttcaact tntcacttt tgtcattgac acctgtagta agltgacaat 60
 gtaggagaaat ttcaaaattt tatgttaactt ctactagttt taatttcttc cccaagcttt 120
 ttttaactca tgattttctac acacacaaac cagaacttct tatatagcct cttaagcttt 180
 attcttcaaa gtagatgatg aaagagtcct ccaagtcttt gngcnaatg ttctagnat 240
 agctggatac ataungtggg agttctataa actcatacct cagtgggact naaccagaat 300
 tgtgtttagtc tcaattctta ccaactgag ggagctctcc aatcactat attcttatct 360
 gcaggtartc ctccagaaa acngacaggy caggcttgca tgaaaaagtn acatctgcgt 420
 tcaaaagctt atttctctca nangtctgtt agggaaacat tcaatcttct agcttt. 476

<210> 97
 <211> 479
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> {1}... (479)
 <223> n = A,T,C or G

<400> 97
 actctttcta atgctgatct gatcttgagt ataagaatgc atatgtcact agaatggata 60
 aaatcaatgct gcaaaactaa tttctttatg caaaatggaa cgtcaattgaa acacagctta 120

caatcgcaaa tcaaaactca caagtgtctc	tctgttgtcg atttagtgta ataaagactta	180
gattgtgctc ctccggatata gattgtttct	canatotttg gcaatntlcc ttagtcaaat	240
caggctacta gaattctgtt attggatctn	tgagagcctg aaatttttaa naatagcaatt	300
gtgattatna aattaatcau aaatttcact	tataoutgct atcagcagcl agaaaaacat	360
ntntttttta natcaaatga ttcttgtgtt	ggaantgttn aaatgaatc tgaatgtggg	420
ttcnatctta ttttttccen gacnactant	tnctttttta gggntctctc tyanccatc	479

<210> 98

<211> 461

<212> DNA

<213> Homo sapien

<400> 98

agtgaattgt cctccaaacaa aaccccttga	tcaagtttgt ggcactgaca atcagaccta	60
tgtatgttcc tgtcatctat tccgtactaa	atgcagactg agggggacca aaaaggggca	120
tcaactccag ctggattatt ttggagcctg	caaatctatt cctacttga cggactttga	180
agtgaattcag ttccctctac ggtgagaga	ctggctcaag aatatactca tgcagcttta	240
tgaagccact ctgaacacgc tggttatcta	gatgaagaca gagaaataaa gtccagaaaat	300
ttacctggag aaagagggct ttggctgggg	accatccat tgaacctctt cttaaggact	360
ttaagaaaaa ctaccacatg ttgtgtatcc	tggtagccggc cgtttatgaa ctgaccaccc	420
tttgaataaa tcttgacgt cctgaacctg	ctcctctgcg a	461

<210> 99

<211> 171

<212> DNA

<213> Homo sapien

<400> 99

gtggccgcgc gcagggtgtct cctcgtaccg	cagggccccc tcccttcccc aggggtccct	60
cggcgccctc gggggcccca ggaggagcgc	ctggcgggtg gggggagtgt gaccacccc	120
cggtagaaaa agccttctct agugatctga	gaggcgtgac ttgggggtac c	171

<210> 100

<211> 269

<212> DNA

<213> Homo sapien

<400> 100

cggccgcgaag tgcacctccg gctggggccg	tgcggacgaa gattctgcca gcagttggtc	60
cgaactgcgau gacggccggcg gcgacagtcg	caggtgcagc gggggccccc ggggtcttgc	120
aaggctgagc tgacgccgca gaggctcgtg	cacgtcccac gacattgacg ccgtcgggga	180
cagccgggaac agagcccggt gaagcggggg	gcctcgggga gccctccggg aaggccggcc	240
cagagagatac gcagggtgacg gtggccgc		269

<210> 101

<211> 405

<212> DNA

<213> Homo sapien

<400> 101

tttttttttt ttttggact tacttgagc	acagcaggtc agcaacaggt ttattttgaa	60
gctagcaagg taavagggtt gggcatggtt	acatgttcag gtnaactlcc ttctcgttg	120
ttgattgggt tgtctttatg gggggcgggt	ggggtaggga aaacgaagca aataacatgy	180
agtgggtgca cctccctgt agaacctggt	tcnaagctt ggggcagttc acctggctcg	240
tgaacctcat tttcttgaca tcaatgttat	tagaagttag gttatctttt agagagctca	300

ctgttcttga	gggagcttga	ggtttcttgc	caaatccaac	aaatccact	gaasaagttg	360
gctgctcagt	acgaataccg	aggcatatc	tcatactggt	ggcca		405

<210> 102
 <211> 470
 <212> DNA
 <213> Homo sapien

<400> 102						
tttttttttt	tttttttttt	tttttttttt	tttttttttt	tttttttttt	tttttttttt	60
ggcacttaat	ccatctttat	ttcaaatgt	ctacaaattt	aatccattta	tacgggtatt	120
tcgaatcta	attattcaa	attagcga	tccttccaa	ataatcccc	anaatcaaaa	180
atatacttt	ttcagcga	ttgttacta	aatcaaaaa	atatactagg	ctgggtcttt	240
caaggttaca	ttatctaac	actgcgaac	tttttggga	ctaaaaaaa	aaaaaacact	300
ccgcaaggt	taaaggga	aaatattct	tttacaac	cttatataa	atcatatctc	360
aaatcttgg	ggaatataa	cttcacacg	gatcttaact	tttactact	ttgtttattt	420
tttttaacca	ttgtttggg	caaacacat	ggaatcccc	ctggactagt		470

<210> 103
 <211> 581
 <212> DNA
 <213> Homo sapien

<400> 103						
tttttttttt	ttttttttga	ccccctctt	ataaaaaa	agttaccatt	ttattttact	60
tacacatatt	tattttata	ttggtattag	atattcaaaa	ggcagctttt	aaatcaaac	120
taaatggaa	ctgccttaga	tacataattc	ttgggaattt	gcttaaaatc	tgcctaaagt	180
gaaatcttc	tttagctctt	ttggtgttaa	atttttgact	cttgttaaac	atcaaatctc	240
attttttctg	ttttttaa	tatttaattc	ttcatttttt	tcctattccc	aggtcaattt	300
gcttctctag	cotcatttcc	tagctcttat	ctactattag	taagtgggtt	ctttcctaaa	360
agggaaaaaa	gggaggaaga	tggtcacaca	aaacaaac	tttatattcat	atttctactc	420
acgttaataa	aatagcattt	tgtgaagcca	gtcgaaga	aggcttagat	ccttttatgt	480
ccatttttagt	caatcaacga	tatcaaatgt	ccagaatgca	aaaggtttgt	gaacatttat	540
tcaaaagcta	atataagata	tttcacatac	tcattcttct	g		581

<210> 104
 <211> 578
 <212> DNA
 <213> Homo sapien

<400> 104						
tttttttttt	tttttttttt	tttttctctt	tttttttttt	gaaatgagga	tcgagtttct	60
cactctctag	atagggtcag	aagaaaactc	atctttccag	ctttaaaaa	acaaatcaaat	120
ctcttatgct	atatacat	tttaagttaa	ctaagtatc	actgggttat	cttctcctga	180
aggaatctg	ttcattcttc	tcattcatat	agtttatata	agtaactacc	tgcatattga	240
gaggtttttc	ttctctcttt	acaaatata	ttccatgtga	atttgtatca	aacctttatc	300
ttcatgcaaa	ctagaaaaa	atgtttcttt	tgcatgaagag	aagagaacaa	tatagcatat	360
caaaactgct	cgaattgttt	gttaagttaa	ccattctaat	tagttggcag	gagctaatat	420
aaatccactt	tacgacagca	ataataaacc	tgaagtacaa	gttcaaatatc	caaaatcaatt	480
aaagggaac	ttttagcctg	ggtataattc	gttaattcat	tttacaagca	tttattagaa	540
tgaattcaca	tgttatattt	cctagcccaa	cacaatgg			578

<210> 105
 <211> 538
 <212> DNA

<213> Homo sapien

<400> 105

tttttttttt	tttttcagta	ataatcagaa	caatatttat	ttttatattt	aanattcaaa	60
gaaagtgtc	ttacatttaa	taaaagtgtg	ttcttcaaa	tgatcagagg	aattagatat	120
gtcttgaaca	ccaatattaa	tttgaggaaa	atucocaaaa	atacattaa	taattatttt	180
augatratag	agcttgtaaa	tgaaaagata	aaatttgacc	tcagaaactc	tgggatttaa	240
aaatccacta	ttagcaata	aattactatg	gaattcttgc	tttaattttg	tgatgaaatc	300
ggggtgtcac	tggttaacca	acacattctg	aaggatacat	tacttagtga	tgatttotta	360
tgtactttgu	taatacgttg	atatgagttg	acaaagtctt	ctttcttcaa	tcttttaagg	420
ggcagagaa	gaggagaaa	agaaaaggat	tacgcatact	gttctttcta	tgggaaggatt	480
agaatatttt	cctttgcaa	tattaaaaaa	ataataatgt	ttactactag	tgaacccc	538

<210> 106

<211> 473

<212> DNA

<213> Homo sapien

<400> 106

tttttttttt	ttttttagtc	aagtttttat	ttttattata	attaaagttt	tgggtcatttc	60
atttattagc	tttgcactt	acatatttaa	attaaagaaa	cttttttagc	aactgttaaaa	120
tttataaatg	taagggtgca	ttattgagta	atatttctct	ccaagagttg	atgtgtccct	180
tctcccaaca	actaatgaac	agcaacacta	gtttaatctt	attagttagt	atacactgct	240
gcaaaagcta	attctctctt	ccatcccrat	gtgatattgt	gcataatgtt	gagtggtag	300
aatgcaccaa	aattctcaat	caacagcaag	atgaagctag	gctgggcttc	cggtgaaact	360
agactgtgtc	tgtctgaalc	aaatgatctg	acctatccct	ggtggcaaga	actcttcgaa	420
cgccttcttc	aaaggcgctg	ccacatttgt	ggctctttgc	acttggttca	aan	473

<210> 107

<211> 1621

<212> DNA

<213> Homo sapien

<400> 107

cgccatggca	ctgcaggaca	tctcggtcat	ggagctgtac	ggcctggccc	cggggucgtt	60
ctgtactatg	gtcctggctg	acttcggggc	gcgtgtggta	agctgtggcc	ggcccggtc	120
ccgctacgac	gtgagccggt	tgggcccggg	caagcactcg	ctagtgtctg	acctgaagca	180
gccgcgggga	gocgcgtg	tgcggcgctt	gtgcaagcgg	tcggatgtgc	tgttggagcc	240
cttccgcgcg	ggtgtcatgy	agaaactcca	gctgggcaca	gagattctgr	agcgggaaaa	300
tccaagggtt	atttatgcca	ggctgagttg	atttggccag	tcaggaaagt	tctgcgggtt	360
agctggccac	gatatcaact	atttggcttt	gtcaggtgtt	ctctcaaaaa	ctggcagaag	420
tgggtgagat	cgtatgccc	cgctgaatct	cctggctgac	tttgcctgtg	gtggccttat	480
gtgtgcactg	ggcattataa	tggctctttt	tgaacgcaca	cgcactgaca	agggtcaggt	540
caattgatga	aatatgggtg	aaghaacagc	atatttaagc	tctttctctg	ggaaactca	600
gaaatcgagt	ctgtgggaag	caactcgagg	acagaaacat	ttggatgggt	gagcaccttt	660
ctatacgact	tacaggacag	agatggggga	attcactggc	gttggagtaa	tgaaccccca	720
gttctacag	ctgctgatca	aaggacttyg	actaaagtct	gatgaacttc	caaatcagat	780
gagcatggat	gattggccag	aaatgaagaa	ggaatttgca	gatgtatttg	caagaagac	840
gaaggcagag	tgggtgcaaa	tcttgacgg	caagatggcc	tgtgtgactc	cgggtctgac	900
ttttggaggag	gttgttcac	atgatcaca	caaggaaagg	ggctcgttta	tcaccagtga	960
ggagcaggac	gtgagcctcc	gcctgcacc	tctgctgcta	aaacccccag	ccatccttc	1020
tttcaaaaag	gatercttca	taggagaaca	cactgaggag	atatttgaa	aatttggttt	1080
cagcgcgaa	gagatttatc	agcttaactc	agatcaaatc	attgaaagta	alaaggtaaa	1140
agctagtctc	taacttccag	gcccacgggt	caagtgaatt	tgaaatctgc	atttcagtg	1200
taggtaaca	catcacattg	tatgcattga	aacacggagg	aacagtatta	cagtgctcta	1260

```

ccactctaat caagaaaaga attacagact ctgattctac agtgatgalt gaattctaaa 1320
aatgggtatc attaggyctt ttgattctat aacttttggg tacttatact aaattatggg 1380
agttattctg ccttcagatc tgccttgatat atctgltgat attaagattc ttgacttata 1440
ttttgaatgg gttctagtga aaaaggaatg atatatctct gaagacatcg atatacattt 1500
attacacttc ttgattctac catgtagaaa atgaggaaat gccacaaatt gtatgggtgat 1560
aaaagtcatg tgaacaaaaa aaaaaa8888 aaaaaa8888 8888888888 aaaaaa8888 1620
a 1621

```

<210> 108

<211> 382

<212> PRT

<213> Homo sapien

<400> 108

```

Met Ala Leu Gln Gly Ile Ser Val Met Glu Leu Ser Gly Leu Ala Pro
 1          5          10          15
Gly Pro Phe Cys Ala Met Val Leu Ala Asp Phe Gly Ala Arg Val Val
 20          25          30
Arg Val Asp Arg Pro Gly Ser Arg Tyr Asp Val Ser Arg Leu Gly Arg
 35          40          45
Gly Lys Arg Ser Leu Val Leu Asp Leu Lys Gln Pro Arg Gly Ala Ala
 50          55          60
Val Leu Arg Arg Leu Cys Lys Arg Ser Asp Val Leu Leu Glu Pro Phe
 65          70          75          80
Arg Arg Gly Val Met Glu Lys Leu Gln Leu Gly Pro Glu Ile Leu Gln
 85          90          95
Arg Glu Asn Pro Arg Leu Ile Tyr Ala Arg Leu Ser Gly Phe Gly Gln
100          105          110
Ser Gly Ser Phe Cys Arg Leu Ala Gly His Asp Ile Asn Tyr Leu Ala
115          120          125
Leu Ser Gly Val Leu Ser Lys Ile Gly Arg Ser Gly Glu Asn Pro Tyr
130          135          140
Ala Pro Leu Asn Leu Leu Ala Asp Phe Ala Gly Gly Gly Leu Met Cys
145          150          155          160
Ala Leu Gly Ile Ile Met Ala Leu Phe Asp Arg Thr Arg Thr Asp Lys
165          170          175
Gly Gln Val Ile Asp Ala Asn Met Val Glu Gly Thr Ala Tyr Leu Ser
180          185          190
Ser Phe Leu Trp Lys Thr Gln Lys Ser Ser Leu Trp Glu Ala Pro Arg
195          200          205
Gly Gln Asn Met Leu Asp Gly Gly Ala Pro Phe Tyr Thr Thr Tyr Arg
210          215          220
Thr Ala Asp Gly Glu Phe Met Ala Val Gly Ala Ile Glu Pro Gln Phe
225          230          235          240
Tyr Glu Leu Leu Ile Lys Gly Leu Gly Leu Lys Ser Asp Glu Leu Pro
245          250          255
Asn Gln Met Ser Met Asp Asp Trp Pro Glu Met Lys Lys Lys Phe Ala
260          265          270
Asp Val Phe Ala Lys Lys Thr Lys Ala Glu Trp Cys Gln Ile Phe Asp
275          280          285
Gly Thr Asp Ala Cys Val Thr Pro Val Leu Thr Phe Glu Glu Val Val
290          295          300
His His Asp His Asn Lys Glu Arg Gly Ser Phe Ile Thr Ser Glu Glu
305          310          315          320
Gln Asp Val Ser Pro Arg Pro Ala Pro Leu Leu Leu Asn Thr Pro Ala

```

325 330 335
 Ile Pro Ser Phe Lys Arg Asp Pro Phe Ile Gly Glu His Thr Glu Glu
 340 345 350
 Ile Leu Glu Glu Phe Gly Phe Ser Arg Glu Glu Ile Tyr Glu Leu Asn
 355 360 365
 Ser Asp Lys Ile Ile Glu Ser Asn Lys Val Iys Ala Ser Leu
 370 375 380

<210> 109
 <211> 1524
 <212> DNA
 <213> Homo sapien

<400> 109
 ggccaggaggc tgcgcacaggc cctgagcaggc ggcggggggca gacctggccag cggggggggccc 60
 gggcctgggc atgctcact ggcgcacaggc ctgcgcctctt acctggcagg cagctgggac 120
 cagtgcgacc tggtaggtct cactgctctt ctctggggcg tgggtgctcg gctgaccccg 180
 ggttctgac acctgggccg cactgctctt tgcctcgaat tcatgggttt cactgggccc 240
 ctgcttccca tcttcacggc caacaaacag ctggggccca agatcgtcat cgtgagcagg 300
 atgatggaag acgtgttctt ctctctctt tctctggcg tgtggctggt agcctatggc 360
 gtggccacgg aggggctctt gaggccacgg gacagtgaat tcccagctat cctggcgcgc 420
 gtcttctacc gtccctacct gcagatctt gggcagattc ccaggaggga catggacgtg 480
 gccctcatgg agcaccgcaa ctgctgctcg gaggccggt tctgggcaca cctcctggg 540
 gccragggcg gccctggtt ctcccagctt gccaactggc tggtaggtgt gctcctctg 600
 atcttctctg tctgggccc catctgctg gttaacttgc tcatggctt gtttagctac 660
 acattcggca aagtcacagg caacagcgat ctctactgga aggcgcagcg ttaccgctc 720
 atccggggaat tccactctg gcccgagctg gcccgccct ttatcgtcat ctcccactg 780
 ggcctctctg tccaggcaat gtgcaggcga ccccgaggcc cccaggccct ctcccaggcc 840
 ctgagcatt tccgggttta ccttcttaag gtagccgagc ggaagctgct aatgtgggaa 900
 tccgtgcata aggagaactt totgtggcga cgcgctaggg acaagcggga gaggcactc 960
 ggcgtctga aggcacgtc ccagaaggty gacttggcag tgaacacagc gggacacatc 1020
 cgcagtagc aacagcgcct gaaagtgtc gaggcggagg tccagcagtg tagccgcgtc 1080
 ctgggggtgg tggcggaggc cctgagccgc tctgcttgc tggcccccagg tgggcccggc 1140
 cccctgacc tgcctgggtc caaagactga gccctgctgg cggacttcaa ggggaagccc 1200
 ccacagggga ttttctctt agagtgaagg tcatctgggc ctccggcccc gacccctggg 1260
 gccctgctct tgggtgagc cccatgtcca tctgggccac tgtcaggacc accttgggg 1320
 gtgtcactct tacaaaccac agcatgccc gctctccc gaaacagtc cagcctggga 1380
 ggaicaggc ctggatcccc ggcctttatc catctggagg ctgcagggtc cttggggtaa 1440
 cagggaccac agacccctca ccaatcagag attcctcaca ctgggggaat aaaaacattt 1500
 cagggggaan aaaaaaagaa aaaa 1524

<210> 110
 <211> 3410
 <212> DNA
 <213> Homo sapien

<400> 110
 gggaacnagc ctgcacgcgc tggctccggg tgacagccgc ggcctcggc caggatctga 60
 gtgatgagac gtgtccccc tgaggtgccc caccagcaga ggtgttgagc atgggctgag 120
 aagctgggac ggcacnaaag ggtcggcaga aatgggcgac tggctgattc ctaggcagtt 180
 ggcggcagca aggaaggagag gccgagcct ctggagcaga gccgagacga agcagttctg 240
 gagtgcctga acggccccc gagccctacc cgcctggccc actatggtcc agaggctgtg 300
 ggtgagccgc ctgctggggc accggaaagc ccagctcttg caggtcaacc tgrtaacatt 360
 tggcctggag gtgtgtttgg ccgunggcac caactatgt cgcctctgc tggctggaat 420
 gggggtagag ggaaggttca tgaccatggt gctgggcatt ggtccagtc tgggcttgg 480

ctgtgtctcgg	ctcctagggt	cagccagltga	ccaactggcgt	ggagcgtatg	gcccgcgcgc	540
gccttccatc	tgggactgt	ccttgggcat	cctgctgagc	ctctttctca	tcccaggggc	600
cggctggcta	gcagggtgtg	tgtgcccga	tcccagggcc	ctggagctgg	cactgctcxl	660
cctgggctg	gggctgctgg	acttctgtgg	ccagggtgtg	ttcactccac	tggaygcct	720
gctctctgac	ctcttctggg	acccggacca	ctgtctgacg	gctactctct	tctatgctt	780
catgatcagt	cttggggggt	gcttgggcta	cctcctgccc	gccattgact	gggacacrag	840
tgccttggcc	ccctacctgt	gcacccagg	ggagtgtctc	tttggcctgt	tcacccctct	900
cttccctcac	tgcgtagcag	ccacactgct	gggtggctgag	gggtcagctg	tgggcccac	960
cagaccagca	ggaggggtct	cggcccccct	cttctctgccc	cactgctctc	cattgcccgg	1020
ccgtttgggt	tcccggaacc	tgggcgcccc	gcttcccctgg	ctgcaccagc	tgtgctgccc	1080
catgcccgcg	acccctctgt	ggctcttctg	gggtgagctg	tgcagcttga	tggcactcxl	1140
gaccttccag	ctgttttaca	gggatttctg	gggcgagggg	ctgtaccagg	gcgtgcccag	1200
agctgagcgg	ggcaccgggg	cccggagaca	ctatgatgaa	gggttctgga	tgggcagcct	1260
gggggtgttc	ctgcagtggg	ccatctccct	gggtctctct	ctggctcatg	acgggtctgt	1320
gcagcgatct	ggcactctgg	cagtctatct	ggcctgctgt	gcagctcttc	ctgtggctgc	1380
cggttgcaca	tgcctgtccc	acagtgtggc	cgtgggtgaa	gcttcagccg	ccctcaccgg	1440
gttcaccttc	tgcggcctgt	agatccctgc	ctacacactg	gcttccctct	accacgggga	1500
ggaagcaggt	tccctgcccc	aatacctggg	ggacactggg	gggtctagca	gtgagggacg	1560
cctgatgacc	agcttctctg	caggccctaa	gctctggagt	cccttccctc	atgacacgcl	1620
gggtgctgga	ggcagtggcc	tgcctccacc	tccacccggg	ctctgcccgg	ccctctgccc	1680
tgatgtctcc	gtacgtgctg	tgggtgggtg	gcccacctgg	gcccagggtg	tccggggccc	1740
gggcactctg	ctggacctct	ccatccctga	tagtgccttc	ctgctgtccc	agggtggccc	1800
atccctgttt	atgggtctca	ctgtccagct	cagccagctc	gtcactgccc	atctggtgtc	1860
tgcgcagggc	ctgggtctgg	tgcacattta	cttctgtaca	caggtagtat	ttgacagag	1920
cgacttggcc	aatactctag	cgtagaagac	tccagcaca	ttgggttggg	gggcttgcct	1980
cactgggtcc	cagctccctg	ctcctgttag	ccccatgggg	ctgcccgggt	ggccggccag	2040
ttctgttggc	gcccaggtaa	tgtggctctc	tgtgcccaca	ctgtgtgtgt	gaggctgctc	2100
gctgcacagc	tgggggtctg	gggtctcttc	tccctctctc	ccagtctctc	gggtgcccct	2160
actggagggc	ttccaggggg	gttccagctc	ggacttatcc	gggtagggcc	gaagggtctc	2220
atgcaactgg	atgcggggac	tctgcagggt	gatttccctg	gctcaggggt	gacaggttag	2280
ctcctagtgt	agacacacct	agagaggggt	ttttggggag	tgggttccct	cagtcacctg	2340
gtttccctac	tctaagcccc	tttaacctga	gcttctgttc	atgtagctct	tgcctggggg	2400
ttctctaggat	ggaacacctc	tccatgggac	ttgacatata	gacttatctt	tgggggaaga	2460
gtcctgaggg	gcaacacaca	agaaacctgt	ccctcagccc	cacagcactg	tctttttgtc	2520
gatccacccc	cttcttacct	tttatcagga	tgtgtgctgt	tgggtccctc	gttgcctatc	2580
cagagacaca	ggcattttaa	talttaacct	atttatattt	cagagtagaa	gggaatccct	2640
tgtctagctt	tctgtgttgg	tgtctaatat	tgggttaggg	tgggggattc	ccacacacac	2700
gggtccctga	gatagctggt	cattgggctg	atcattgccc	gaatcttctt	ctccttgggt	2760
ctggcccccc	gaaatgacct	acccaggacc	ttggaaattc	tactctctcc	aatagataac	2820
tccaaatgct	gttaccacaag	gttaggggtg	tgaagggaag	tgggggtggg	ggcttcaggt	2880
ctcaacgggt	tccctaacca	ccctctctct	cttggcccag	ctgggttccc	ccacttcca	2940
ctccctctca	ctctctctag	gaatgggctg	atgagggcac	tgcacaaaac	tcccctacc	3000
cccaacttct	ccctaccccc	aactttcccc	accagctcca	cagccctgtt	tggagctact	3060
gcaggaccag	aagcacaaa	tggggtttcc	cagcccttct	tccatctcag	cccccagagt	3120
atatctgtgc	tgggggaatc	tccacacaga	actcaggggc	acccctgtcc	tggcttaagg	3180
gaggtcttat	ctctcagggg	gggtttaagt	gctgttttga	ataatgctgt	cttatcttat	3240
tggcgggggt	aatactttct	actgttagtg	agcactcaga	gtataatgtt	tctgtgtgac	3300
aaatctgggg	ctttctttat	tgttctaaaa	aaaaaaataa	aaaaaaataa	aaaaaaataa	3360
aaaaaaataa	aaaaaaataa	aaaaaaataa	aaaaaaataa	aaaaaaataa	aaaaaaataa	3410

<210> 111

<211> 1289

<212> DNA

<213> Homo sapien

<400> 111

agccaggggt	ccctctgect	gcccactccg	tggcaacacc	egggagctgt	cttgtccttt	60
gtggagcctc	agcagttccc	tctttcagaa	ctcactgccg	agagccctga	acagggagcca	120
ccatgcagtg	cttcagcttc	attaagacca	tgatgatcct	cttcaattty	ctcatctttc	180
tgtgtggtgc	agcccgttg	gcagtgggca	tctgggtgtc	aatcgatggg	gcaccccttc	240
tgaagatctt	egggccactg	tcggtccagtg	ccatgcagtt	tgtcaacgtg	ggctactttc	300
tcategragc	eggggttggg	gtctttgttc	ttgggtttct	gggtgtgtat	gggtgctaaga	360
ctgagagcca	gtgtgcccct	gtgaagtctt	tcttcactct	cttccctcctc	ctcatctgtg	420
aggtttgragc	tgtgtgtgtc	gcctttgggt	acaccacaa	ggctgagrac	ttctgtgargt	480
tgctggtagt	gcctgccctc	aagaagatt	atgggtccca	ggaagacttc	actcaagtgt	540
ggaacacrac	catgaaaggg	ctcaagtgtc	gtgggtccac	caactatacg	gatttttgagg	600
actcacccctc	cttcaagag	aacagtgcct	ttcccccact	ctgttgcaat	gaccaagctc	660
ccaaracagc	caatgaaacc	tgcaccaagc	aaaaggctca	cgacccaaaa	gtayagggtt	720
gcttcaatca	gtttttgtat	gacatccgaa	ctaatgncgt	caccgtgggt	gggtgtggcag	780
ctgggaattgg	gggcttcgag	ctgggtgcca	tgattgtgtc	catgtatctg	tautgcaatc	840
tacaataagt	ccactctctg	ctctgcaact	actgtgtcca	catgggaact	gtgaagaggg	900
ccccctggcaa	gragcagtg	ttggggggagg	ggacaggatc	taacaaatgtc	acttgggcca	960
gaatggacct	gcctttctct	ctccagactt	gggggtgat	agggaccact	cctttttagcg	1020
atgcctgact	ttccttccat	tgggtgggtg	atgggtgggg	ggcatterag	agcctctaag	1080
gtagcragtt	ctgttgccca	ttcccccagt	ctattaaacc	cttgatctgc	ccccagggcc	1140
tagtgggtgat	cccagtgttc	tactggggga	tgagagaaag	gcattttata	gacctgggcct	1200
aagtgaatc	agcagagcct	ctgggtggat	gtgtgagagg	cacttcacaa	tgcataaacc	1260
tgttccaatg	ctaaaaaaa	aaaaaaag				1269

<210> 112

<211> 115

<212> PRT

<213> Homo sapien

<400> 112

Met	Val	Phe	Thr	Val	Arg	Leu	Leu	His	Ile	Phe	Thr	Val	Asn	Lys	Gln
1				5				10						15	
Leu	Gly	Pro	Lys	Ile	Val	Ile	Val	Ser	Lys	Met	Met	Lys	Asp	Val	Phe
			20					25					30		
Phe	Phe	Leu	Phe	Phe	Leu	Gly	Val	Trp	Leu	Val	Ala	Tyr	Gly	Val	Ala
			35				40					45			
Thr	Glu	Gly	Leu	Leu	Arg	Pro	Arg	Asp	Ser	Asp	Phe	Pro	Ser	Ile	Leu
			50			55					60				
Arg	Arg	Val	Phe	Tyr	Arg	Pro	Tyr	Leu	Gln	Ile	Phe	Gly	Gln	Ile	Pro
65					70				75					80	
Gln	Glu	Asp	Met	Asp	Val	Ala	Leu	Met	Glu	His	Ser	Asn	Cys	Ser	Ser
			85					90					95		
Glu	Pro	Gly	Phe	Trp	Ala	His	Pro	Pro	Gly	Ala	Gln	Ala	Gly	Thr	Cys
			100				105						110		
Val	Ser	Gln	Tyr	Ala	Asn	Trp	Leu	Val	Val	Leu	Leu	Leu	Val	Ile	Phe
			115			120						125			
Leu	Leu	Val	Ala	Asn	Ile	Leu	Leu	Val	Asn	Leu	Leu	Ile	Ala	Met	Phe
			130			135					140				
Ser	Tyr	Thr	Phe	Gly	Lys	Val	Gln	Gly	Asn	Ser	Asp	Leu	Tyr	Trp	Lys
145					150				155					160	
Ala	Gln	Arg	Tyr	Arg	Leu	Ile	Arg	Glu	Phe	His	Ser	Arg	Pro	Ala	Leu
			165					170						175	
Ala	Pro	Pro	Phe	Ile	Val	Ile	Ser	His	Leu	Arg	Leu	Leu	Leu	Arg	Gln
			180				185						190		
Leu	Cys	Arg	Arg	Pro	Arg	Ser	Pro	Gln	Pro	Ser	Ser	Pro	Ala	Leu	Gln

195	200	205
His Phe Arg Val Tyr Leu Ser Lys Glu Ala Glu Arg Lys Leu Leu Thr		
210	215	220
Trp Glu Ser Val His Lys Glu Asn Phe Leu Leu Ala Arg Ala Arg Asp		
225	230	235
Lys Arg Glu Ser Asp Ser Glu Arg Leu Lys Arg Thr Ser Gln Lys Val		
245	250	255
Arg Leu Ala Leu Lys Gln Leu Gly His Ile Arg Glu Tyr Glu Gln Arg		
260	265	270
Leu Lys Val Leu Glu Arg Glu Val Gln Gln Lys Ser Arg Val Leu Gly		
275	280	285
Trp Val Ala Glu Ala Leu Ser Arg Ser Ala Leu Leu Pro Pro Gly Gly		
290	295	300
Pro Pro Pro Pro Asp Leu Pro Gly Ser Lys Asp		
305	310	315

<210> 113

<211> 553

<212> PRT

<213> Homo sapien

<400> 113

Met Val Gln Arg Leu Trp Val Ser Arg Leu Leu Arg His Arg Lys Ala	
1	15
Gln Leu Leu Leu Val Asn Leu Leu Thr Phe Gly Leu Glu Val Cys Leu	
20	30
Ala Ala Gly Ile Thr Tyr Val Pro Pro Leu Leu Leu Glu Val Gly Val	
35	45
Glu Glu Lys Phe Met Thr Met Val Leu Gly Ile Gly Pro Val Leu Gly	
50	60
Leu Val Cys Val Pro Leu Leu Gly Ser Ala Ser Asp His Trp Arg Gly	
65	80
Arg Tyr Gly Arg Arg Arg Pro Phe Ile Trp Ala Leu Ser Leu Gly Ile	
85	95
Leu Leu Ser Leu Phe Leu Ile Pro Arg Ala Gly Trp Leu Ala Gly Leu	
100	110
Leu Cys Pro Asp Pro Arg Pro Leu Glu Leu Ala Leu Leu Ile Leu Gly	
115	125
Val Gly Leu Leu Asp Phe Cys Gly Gln Val Cys Phe Thr Pro Leu Glu	
130	140
Ala Leu Leu Ser Asp Leu Phe Arg Asp Pro Asp His Cys Arg Gln Ala	
145	160
Tyr Ser Val Tyr Ala Phe Met Ile Ser Leu Gly Gly Cys Leu Gly Tyr	
165	175
Leu Leu Pro Ala Ile Asp Trp Asp Thr Ser Ala Leu Ala Pro Tyr Leu	
180	190
Gly Thr Gln Glu Glu Cys Leu Phe Gly Leu Leu Thr Leu Ile Phe Leu	
195	205
Thr Cys Val Ala Ala Thr Leu Leu Val Ala Glu Glu Ala Ala Leu Gly	
210	220
Pro Thr Glu Pro Ala Glu Gly Leu Ser Ala Pro Ser Leu Ser Pro His	
225	240
Cys Cys Pro Cys Arg Ala Arg Leu Ala Phe Arg Asn Leu Gly Ala Leu	
245	255
Leu Pro Arg Leu His Gln Leu Cys Cys Arg Met Pro Arg Thr Leu Arg	

```

      260      265      270
Arg Leu Phe Val Ala Glu Leu Cys Ser Trp Met Ala Leu Met Thr Phe
      275      280      285
Thr Leu Phe Tyr Thr Asp Phe Val Gly Glu Gly Leu Tyr Gln Gly Val
      290      295      300
Pro Arg Ala Glu Pro Gly Thr Glu Ala Arg Arg His Tyr Asp Glu Gly
305      310      315
Val Arg Met Gly Ser Leu Gly Leu Phe Leu Gln Cys Ala Ile Ser Leu
      325      330      335
Val Phe Ser Leu Val Met Asp Arg Leu Val Gln Arg Phe Gly Thr Arg
      340      345      350
Ala Val Tyr Leu Ala Ser Val Ala Ala Phe Pro Val Ala Ala Gly Ala
      355      360      365
Thr Cys Leu Ser His Ser Val Ala Val Val Thr Ala Ser Ala Ala Leu
      370      375      380
Thr Gly Phe Thr Phe Ser Ala Leu Gln Ile Leu Pro Tyr Thr Leu Ala
385      390      395
Ser Leu Tyr His Arg Glu Lys Gln Val Phe Leu Pro Lys Tyr Arg Gly
      405      410      415
Asp Thr Gly Gly Ala Ser Ser Glu Asp Ser Leu Met Thr Ser Phe Leu
      420      425      430
Pro Gly Pro Lys Pro Gly Ala Pro Phe Pro Asn Gly His Val Gly Ala
      435      440      445
Gly Gly Ser Gly Leu Leu Pro Pro Pro Ala Leu Cys Gly Ala Ser
      450      455      460
Ala Cys Asp Val Ser Val Arg Val Val Val Gly Glu Pro Thr Glu Ala
465      470      475
Arg Val Val Pro Gly Arg Gly Ile Cys Leu Asp Leu Ala Ile Leu Asp
      485      490      495
Ser Ala Phe Leu Leu Ser Gln Val Ala Pro Ser Leu Phe Met Gly Ser
      500      505      510
Ile Val Gln Leu Ser Gln Ser Val Thr Ala Tyr Met Val Ser Ala Ala
      515      520      525
Gly Leu Gly Leu Val Ala Ile Tyr Phe Ala Thr Gln Val Val Phe Asp
      530      535      540
Lys Ser Asp Leu Ala Lys Tyr Ser Ala
545      550

```

<210> 114

<211> 241

<212> PRT

<213> Homo sapien

<400> 114

```

Met Gln Cys Phe Ser Phe Ile Lys Thr Met Met Ile Leu Phe Asn Leu
1      5      10      15
Leu Ile Phe Leu Cys Gly Ala Ala Leu Leu Ala Val Gly Ile Trp Val
      20      25      30
Ser Ile Asp Gly Ala Ser Phe Leu Lys Ile Phe Gly Pro Leu Ser Ser
      35      40      45
Ser Ala Met Gln Phe Val Asn Val Gly Tyr Phe Leu Ile Ala Ala Gly
      50      55      60
Val Val Val Phe Ala Leu Gly Phe Leu Gly Cys Tyr Gly Ala Lys Thr
      65      70      75      80
Glu Ser Lys Lys Ala Leu Val Thr Phe Phe Phe Ile Leu Leu Leu Ile

```


	85	90	95
Phe Ile Ala Glu Val Ala Ala Ala Val Val Ala Leu Val Tyr Thr Thr			
	100	105	110
Met. Ala Glu His Phe Leu Thr Leu Leu Val Val. Pro Ala Ile Lys Lys			
	115	120	125
Asp Tyr Gly Ser Gln Glu Asp Phe Thr. Gln Val Trp Asn Thr Thr Met			
	130	135	140
Lys Gly Leu Lys Cys Cys Gly Phe Thr Asn Tyr Thr Asp Phe Glu Asp			
	145	150	155
Ser Pro Tyr Phe Lys Glu Asn Ser Ala Phe Pro Pro Phe Cys Cys Asn			
	165	170	175
Asp Asn Val. Thr Asn Thr Ala Asn Glu Thr Cys Thr Lys Gln Lys Ala			
	180	185	190
His Asp Gln Lys Val Glu Gly Cys Phe Asn Gln Leu Leu Tyr Asp Ile			
	195	200	205
Arg Thr Asn Ala Val Thr Val Gly Gly Val Ala Ala Gly Ile Gly Gly			
	210	215	220
Leu Glu Leu Ala Ala Met Ile Val Ser Met Tyr Leu Tyr Cys Asn Leu			
	225	230	235
Gln			240

<210> 115
 <211> 366
 <212> DNA
 <213> Homo sapien

<400> 115
 getctttctc tccctcctc tgaatttaac tcttcaact tgcattttgc aaggattaca 60
 cattccactg tgatgtatat tgtgttgcaa aaaaaaanaa gtgtctttgt tttaaattac 120
 ttggtttgtg aatccatctt gcttttccc ccttggaact agtccttaac ccattctctga 180
 actggttagaa aaacatctga agagctagtc tctcagcctc tgcaggtga attggatggc 240
 tctcagaacc atttcaccca gacagcctgt tctatcttg ttttaactaat tagtttgggt 300
 tctctacatg cctaaccaac cctgcttcaa tctgtcact aagaactctg gacttgaagt 360
 ttagtc 366

<210> 116
 <211> 282
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1) ... (282)
 <223> n = A,T,C or G

<400> 116
 acaaagatga accatttctt atatttatagc azaattaaaa tctaccctgt ttctaatact 60
 gagaactgag atnaaacaca atnttataaa gtctacttag agaagatcaa gtgaactcaa 120
 agacttactt attttcatat ttaagacac atgatttctc ctattttagt aacctgggtc 180
 ataagttaa caaaggataa tgtgaacagc agagaggatt tgttggcaga aaatctatgt 240
 tcaatctnga cclatctana tcacagacat tctatttctt tt 282

<210> 117
 <211> 305

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)... (305)

<223> n = A,T,C or G

<400> 117

acacatgtcg	cttcaactgcn	tlcttagatg	cttctgggtca	acatanagga	acaggggacca	60
tatttatect	ccttccttga	acaattgcaa	aatcaanacaa	aatatatgaa	acaattggcaa	120
ataaaggcaa	aatatatgaa	acaaacaggtc	tcgagatatt	ggaaatcagt	caatgaagga	180
tactgatccc	tgatcaatgt	cctaattgacg	gatgtgggaa	acagatgagg	tcacct.ctgt	240
gactgcccc	gcttactgca	tgtatagagt	ttctangcta	cagttcagac	aggagagaat	300
tggtgt						305

<210> 118

<211> 71

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)... (71)

<223> n = A,T,C or G

<400> 118

accaagggtgt	ntgatctctt	gaagtgggga	ctcttgattc	cgcacaaatc	tgagtggaaa	60
aantcctggg	t					71

<210> 119

<211> 212

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)... (212)

<223> n = A,T,C or G

<400> 119

actccgggttg	gtgtcagcag	gaagtggeat	tgaaatnngc	aatgtggagc	cnaaacrcaa	60
gaaaatgggg	tgaaattggc	caactttcta	tnaacttatg	ttggcaantt	tgcacacaa	120
agtaagctgg	cactttctaat	aaaagaaaat	tgaaggyttt	cttactaenc	ggattaant	180
aatggantca	agaaactccc	agguctcagc	gt			212

<210> 120

<211> 90

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)... (90)

<223> n = A,T,C or G

<400> 120
 ectcgttgcg natcaggggc ccccccagagt caccgttgcg ggagtccttc tggctcttgcg 60
 ctccgcctggc gcagaaacatg ctgggggtggt 90

<210> 121
 <211> 218
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> {1}...{218}
 <223> n = A,T,C or G

<400> 121
 tgtatcgtga anacgacaga nagggttctg aaaaatggag aanccttgaa gtcattttga 60
 gaataagatt tgcctaaaaga tttggggcta aaacatgggt attgggagac atttctgaag 120
 atatncanct aaattangga atgaattcat ggtctcttct ggaattcctt taagatngcc 180
 agcatanact tcatgtgggg atancagcta ccttctga 218

<210> 122
 <211> 171
 <212> DNA
 <213> Homo sapien

<400> 122
 taggggtgta tycactgta aggacaaaan ttgagactca actggcttaa ccaataaagg 60
 catttggttag ctcatgggac aggaagtcgg atgggtgggg atcttcaglg ctgcattagt 120
 caccaccccg gcgggggtcat ctgtgccaca ggtccctgtt gacagtgcgg t 171

<210> 123
 <211> 76
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> {1}...{76}
 <223> n = A,T,C or G

<400> 123
 ctatagcgtga agacnacaga atgggtgtgt ctgtgctatc caggaaacaa ttattattca 60
 ttatcaanta ttgtgt 76

<210> 124
 <211> 131
 <212> DNA
 <213> Homo sapien

<400> 124
 acccttcccc aaggccaatg tctgtgtgt taactggccg gctgcagggc agctgcaatt 60
 caatgtgtgt ggtcatatgg aggggagggg actctaaat agccaatttt attctcttgg 120
 ttatgatttg t 131

<210> 125
 <211> 432
 <212> DNA
 <213> Homo sapien

<400> 125
 accttatctc ctggctatga aatagatggt ggaaaattgc gttaccaact ataccactgg 60
 cttgaanaag aggtgatagc ttttcagagg acttgtgact ttgctcaga tgrtgaagaa 120
 ctacagtcctg cttttggcag aatgaaagat gaatttggat taatgagga tgcagaagat 180
 ttgcttcacc aacaaaggt gaaccaactg agagaaatt ttcaggaaa aagacagtgg 240
 ctcttgaggt atcagtcact tttgagaatg tttcttagtt actgcatact tcatggatcc 300
 catgggtgggg gtcttgcata tgaagaatg gaattgattt tgccttttga agaattctag 360
 caggaaacat cagaaccact atttctctagc cctctgtcag agcaaacctc agtgcctctc 420
 ctctttgctt gt 432

<210> 126
 <211> 112
 <212> DNA
 <213> Homo sapien

<400> 126
 acacaacttg aatagtataa tgaacttga gctgaaattt ctaattcact ttctaaccat 60
 agtaagaatg atatttccc ccagggatca ccaatatatt ataaattt gt 112

<210> 127
 <211> 54
 <212> DNA
 <213> Homo sapien

<400> 127
 accacgaac cacaacaaag atggagcat caatccactt gccaaagaca gcag 54

<210> 128
 <211> 323
 <212> DNA
 <213> Homo sapien

<400> 128
 acctcattag taattggtttt gttgtttcat tttttctbaa tgtctccctt ctaccagctc 60
 acctgagata acagaaatgaa aatggaaagg cagccagatt tctcctttgc tctctgctca 120
 ttctctctga agtctagggt acccattttg gggacccatt ataggcaata aacacagttc 180
 ccaagcatt tggacagttt ctgtgtgtgt tttagaatgg tttcctttt tcttagcctt 240
 ttctgcaaa aggcctcact agtcccttgc ttgctcagt gactgggctc ccaggggcct 300
 aggcctgctt cttttccatg tcc 323

<210> 129
 <211> 192
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> {1} ... {192}
 <223> n = A, T, C or G

<400> 129
 acatagcatgt ggttatattt ttaactatca ttttctatc actctgactt ttagcatag 60
 tgaataacata ctactatcat tntgtgac catgatcaga tacaaccaa atcattcatt 120
 tagcacattc atctgtgata naaagatagg tgaatttcatt ttccttcaag ttggccaatg 180
 gataaacaaa gt 192

<210> 130

<211> 362

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(362)

<223> n = A,T,C or G

<400> 130
 ccttttttla tgaatgagt agactgtatg tttgaanatt tancacacac ctctctgaca 60
 tataatgacg caacaaaaag gtgtgttta gtctataggt tcagtttatg cccctgacaa 120
 gttctcattg tgttttgccg atctcttggc taatctgtgt atcttccatg ctattagtaa 180
 ttctgtattc ctttttgtaa acgcttggta gatgtaacat gtatngaggc taactttata 240
 cttattttaa agctcttatt ttgttgtcat taaaatggca atttatgtgc agcaatttat 300
 tgcagcaggc agcactgtg ggttggattg aaagctcttt gctaatttta aaaagttaat 360
 gg 362

<210> 131

<211> 332

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(332)

<223> n = A,T,C or G

<400> 131
 ctttttgaaa gatcgtgtcc actcctgtgg acatcttgtt ttaatggagt ttcccatgca 60
 gtatngactgg tatggttgca gctgtccaga taaaaacatt tgaagagctc caaatgaga 120
 gttctccrag gttcgccttg ctgtcccaag tctcagcagc agcctctttt agyaggcatt 180
 ttctgaacta gattaaggca gcttgttaat ctgatgtgat ttggtttatt atccaaacta 240
 ctccatctg ttatcactgg agaaagccca gactccccan gacnggtacg gattgtgggc 300
 atanaaggat tgggtgaagc tggcgttgtg gt 332

<210> 132

<211> 322

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(322)

<223> n = A,T,C or G

<400> 132
 acttttgcca ttttctatat ataaacaatc ttgggaattt ctcttgaaaa ctgggtgtcc 60

```

agtgggctaag agaactccgat ttcangcaat tctgaaaggga aaaccagcat gacacagaat. 120
ctcaaatcttc caaacagggg ctctgctggga acaatgaggg aggacctttg tatctcgggt 180
tttagcaagt taaatgaen atgacaggaa aggcctctctt atcaacaaag aggaagagttg 240
ggatgctctc aaaaaaact ttggtagaga aaataggaa gctnaatctt aggggaagct 300
gtacacatct acaattggtc ca 322

```

```

<210> 133
<211> 278
<212> DNA
<213> Homo sapien

```

```

<220>
<221> misc_feature
<222> (1)...(278)
<223> n = A,T,C or G

```

```

<400> 133
acaagccctc acaagttta ctcaattggg attaatcttt ctgtantctt ctgcataatt 60
ctgttttttc ttccatctg gctcctgggt tgacaatttg tggaaacaa tctattgcta 120
ctatttaaaa acaatcaca atcttccct ttaugctatg ctcaattcaa actattcctg 180
ctattctgtt ttgtcaaaag aatttatatt ttcaaaata tctntatttg ttgatgggt 240
cccagaaac actaataaa accacagaga ccagcctg 278

```

```

<210> 134
<211> 121
<212> DNA
<213> Homo sapien

```

```

<220>
<221> misc_feature
<222> (1)...(121)
<223> n = A,T,C or G

```

```

<400> 134
gtttanaaaa ctgtcttagc tccatagagg aaggaatgtt aaactctgta ttttaaaara 60
tgattctctg aggttaaaact tggctctcaa atgttatctt lactgtatt ttgctcttgg 120
t 121

```

```

<210> 135
<211> 350
<212> DNA
<213> Homo sapien

```

```

<220>
<221> misc_feature
<222> (1)...(350)
<223> n = A,T,C or G

```

```

<400> 135
acttanaacc atgectagca catcagaato cctcaaagaa catcagata atccataacc 60
atancaagtg gtgactgggt aagcgtgcga caaaggtagg ctggcaccct acctgtgtgc 120
aaacttgata cttttgttct aagtaggaac tagtatcacg ttcctaggan tgglaactca 180
gggtgccccn caactcctgc agccgtctct ctgtgcacgn cctgnaagg aactttcgct 240
ccacctcaat caagccctgg gccatgctac ctgcaactgg ctgaacaaac gttagctgag 300
ttccraagga tgcgaagcct ggtgctcaac tccctggggcg tcaactcagt 350

```

<210> 136
 <211> 399
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(399)
 <223> n = A,T,C or G

<400> 136
 tgtaccgtga agacgacaga agttgcctgg cagggacagg gacggggccga ggccagggtt 60
 gctgtgattg tatccgaaata ntccctcgtga gaaaagatga tgagatgacg tgagcagcct 120
 gcagacttgt gtctgccttc aanaagccag acaggaaggc cctgcctgcc ttgggtctga 180
 cctggcgggc agccagccag ccacaggtgg gcttcttctt tttgtggtga caacnccag 240
 aaaaactgcc agggccaggg ttaggtgtga gtgggtangl gacataaaa caccagggtg 300
 tccagggac ccgggcagg gccatcccca cctacagcca gcctgcccaa tggcgtgctg 360
 ggtgcagang gatgaagcag ccagntgctc tctgtgtgt 399

<210> 137
 <211> 165
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(165)
 <223> n = A,T,C or G

<400> 137
 actggtgtgg tnggggggtga tctgtgtgtg aaggttgan gtgacttcac gatggtgtgt 60
 gggggaggtg tgtgaacgta gggatgtaga ngttttggcc gtgctaaatg agcttcggga 120
 ttggctgggt ccactggttg tcartgtcat tggtygggtt cctgt. 165

<210> 138
 <211> 338
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(338)
 <223> n = A,T,C or G

<400> 138
 actcactgga atgucacatt cacaacagaa ttagagggtc gtagaaacat taatgggtcc 60
 ttaactttct cagtaagaaat cagggacttg aaatggaaac gttaacagcc acatgcccaa 120
 tgcctgggcag tctccratgc cttccacagt gaaagggctt gagaannaat acatccaatg 180
 tcatgtgttt ccagccacac caaaaggtgc ttggggtgga gggctggggg catananggt 240
 cangcctcag gaggcctcaa gttccattca gctttgccac tgtacattcc ccatttttaa 300
 aaaaactgat gctttttttt tttttttttg taanaattc 338

<210> 139
 <211> 382

<212> DNA

<213> Homo sapien

<400> 133

gggaatcttg	gtttttggca	tctggtttgc	ctatagccga	ggcactcttg	acagaacaaa	60
gaaggggact	tcgagtaaga	agglaattta	cagcagcccl	agtgcacgaa	gtgaaaggag	120
attcacaacg	acctcgatcat	tcttggtgth	agcctgggtcg	gtcaccgcgc	tatcatctgc	180
atttgccctt	ctcaggtgct	accggactct	ggcccttgat	gtctgtagtt	tcacaggatg	240
ccttatcttc	cttctacacc	ccacaggggc	ccctacttct	tcggatgctt	ttctaataat	300
gtcagctatg	tgcacacatc	tccttcatgc	cctccctcc	tttccacca	ctgctgagtg	360
gcctggaaact	tgtttaagtg	gt				382

<210> 140

<211> 200

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1) ... (200)

<223> n = A,T,C or G

<400> 140

accaaancct	ctttctgttg	tgctngatct	tactataggg	gtctngcttn	ttctaaanat	60
acttttcatt	taacancctt	tgcttaagtg	caggctgcac	tttgcctcat	anaattattg	120
ttttcacatt	tcacattgta	tgcttttgct	tcctanagca	ttggtgaaat	cacatattct	180
atcttcagca	taaaggagaa					200

<210> 141

<211> 335

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1) ... (335)

<223> n = A,T,C or G

<400> 141

actttatctt	cacaacactc	atatgttgca	aaaaacacat	agaaaaataa	agtttggttg	60
gggtgctgac	ttaacttcaa	gtcacagact	tttatgtgac	agattggagc	agggtttgct	120
atgcatgtag	agaaccccaa	ctaatttatt	aaacaggata	gaaacaggct	gtctgggtga	180
aatggttctg	agaaccatcc	aattcacctg	tcagatgctg	atanactagc	ctttcagatg	240
ctttctacc	agttcagaga	tnggttaatg	actantccca	atgggggaaa	agcaagatgg	300
attcacaaac	caagtaattt	taaaccaaga	cactt			335

<210> 142

<211> 459

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1) ... (459)

<223> n = A,T,C or G

<400> 142

accagggttaa	tattgconca	tatatccttt	ccaattgggg	gctaaacaga	cggtgatttt	60
gggttgtttt	aagacaacnc	agcttattat	caagagaaat	tgtgaacctt	catggagtat	120
ctgatggaga	aaacactgag	ttttgacaaa	tcttatttta	ttcagatagc	agtctgatca	180
caacttggcc	aacaacactc	aaacactaaa	tcaaatatna	tcagatggtt	aagattgggtc	240
ttcaaacatc	atagccaatg	atgccccgct	tgcctataat	ctctccgaca	tcaaacnaca	300
tcaaaccttc	agtggccncc	aaacatttca	gcacagcttc	cttaactgtg	agctgtttga	360
agctaccagt	ctaggaacta	ttgactatnt	ttttcangct	ctgaatagct	ctagggatcl	420
cagcangggc	gggaggaacc	agctcaacct	tggcgantc			459

<210> 143

<211> 140

<212> DNA

<213> Homo sapien

<400> 143

acattttcctt	ccaccaagtc	aggactctctg	gcttctgtgg	gggttcttat	cacctgaggg	60
aatcccaaac	agtctctctt	agaaaggaat	agtgtcaaaa	acccacacca	ctctcctgag	120
accctccgaa	ttcctgtgt					140

<210> 144

<211> 164

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1) ... (164)

<223> n = A,T,C or G

<400> 144

acttcagtaa	caacatataa	taacaacatt	aaagtgtatat	tgcctctttt	gtcattttct	60
atctatacca	ctctcccttc	tyaaacaaan	aattcactenc	caatcactta	tacaaatttg	120
aggcaattta	tccatatttg	ttttcaatca	ggaaanaaag	atgt		164

<210> 145

<211> 303

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1) ... (303)

<223> n = A,T,C or G

<400> 145

acgtagagca	cccaactttg	tatttgaat	ggcaaacatc	cagagacaat	tcttaaacaa	60
actggagggc	attttaccc	aattatccca	ttcatttaaa	tgcctccctc	ctcaggctat	120
gcaaggacag	tatcataagc	gggcccaggc	atccagatgc	ttccatttgc	ataaacctta	180
gtaggggagt	ccatccaagt	gacaggctta	atcaaggag	gaataggacc	ataagcccag	240
tagtataatn	ttgcttaagc	gaacagcca	caaaagactt	acggccgtgg	tgattaccat	300
caa						303

<210> 146

<211> 327

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1) ... (327)

<223> n = A,T,C or G

<400> 146

actgcagrtc aattagaagt ggtctctgac ttctatcanc ttctccctgg gttccatgac	60
actgggctgg agtgactcat tgctctgggt ggttgagaga gtccctttgc caacaggcct	120
craagtcagg gctgggattt gtctcttctc cactctctag caacatattg ctggccactt	180
cctgaacagg gagggtggga ggagccagca tggaaacagg tgcactttt taaagttagc	240
agacttgccc ctgggctctg caccactact gatgaacttc tgtgcttgcg ggatgggaatg	300
tgggggtggg ctgtgtgact ctatgggt	327

<210> 147

<211> 173

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1) ... (173)

<223> n = A,T,C or G

<400> 147

acattgtttt tttyagatca agcattgana gagctctccr taagtgaca caatgggaagg	60
actgggaacc ataccacat ctctgttctg agggataatt ttctgataaa gtcttgctgt	120
atattcaagg acatatgtta tatattatct agttccatgt ttatagccta gtt	173

<210> 148

<211> 477

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1) ... (477)

<223> n = A,T,C or G

<400> 148

acaaccactt tctctcatcg aatttttaac ccaaacctcac tcaactgtgac ttctatctct	60
atgggatata ttatttgatg ctccctttca tcaracatat atgaataata cactcatact	120
gccctactac ctgctgcact aatcacattc ccttctgttc ctgacctga agcattggg	180
gtgttcctag tggccatcag tccanycctg cactcttgag ccttgagctc ctttgcctac	240
ncanccacac ctcaaccgac ccatctcttt acacagctac ctcttgcctc tctaaaccca	300
tagattatnt ccaasttcag tcaattaaat tacttttaac actctacccg acatgtccag	360
caccactggg agcctttctc cagccaaacac acacacacac acanccacac ccacacatat	420
ccaggcacag gctacctcat ctcccaaatc acccctttta taccatgct atgggtgg	477

<210> 149

<211> 207

<212> DNA

<213> Homo sapien

<400> 149

```
acagttgtat tataatcucc agaatataar ttcgcatgag agcatttcaq aggggaagaa 60
taacgtatct tggagagcca aggaaggttt ctgtggggag lyygatgtaa gglggggcct 120
gatgataaat aagagtcagc caggtaagtg ggtggtgtgg tatgggcaca gtgaagaaca 180
tttcaygcag aggggaacagc agtgaan 207
```

<210> 150

<211> 111

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> {1}...{111}

<223> n = A,T,C or G

<400> 150

```
accttgattt cattgctgct ctgatggaaa ccccaactatc taatttagct aagacatggg 60
cacttaaaay tggtcagtggt ttggactbgt taactantgg catuttctggg t 111
```

<210> 151

<211> 196

<212> DNA

<213> Homo sapien

<400> 151

```
agcgcgccag gtcctattga acattccaga taccctatcat tactcgatgc tgttgataac 60
agcaagatgg ctctgaactc agggtcacca ccagctattg gaccttacta tgaaaacat 120
ggataccac ccgaaaacc ctatcccgca cagccactg tggccccac tgtctargag 180
gtgcatccgg ctcaagt 196
```

<210> 152

<211> 132

<212> DNA

<213> Homo sapien

<400> 152

```
acagcatttl cactgttaag aaggggagaa ttcttaaatg taggagaaag ataacagAAC 60
cttccctttt tcatctagtg gtggaaacct gatgctttat gttgacagga atagaaccag 120
gagggagtct gt 132
```

<210> 153

<211> 285

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> {1}...{285}

<223> n = A,T,C or G

<400> 153

```
acaaatcccc nganaggcca ctggccgtgg tgtcatggcc tccaaacatg aaggtgtcag 60
```

```

cttctgctct tatgtctca tctgacatct ctttaccatt ttatctctcg ctcaagcayga      120
gcacatcaat aaagtcaaa gtcttggact tggccttggc ttggaggag agtcacacac      180
cttgctagt gagggtggg cgcgcctctt ggaatgacgg atctgtgag tctgacaca      240
gtctgcaggc cctgtggaag cgccgtccac agggagtnag gaatt      285

```

```

<210> 154
<211> 313
<212> DNA
<213> Homo sapien

```

```

<400> 154
accacagtcc tggtaggaca gggcttcctg accctctctg tgaaaagcca tattatcacc      60
accacaaatt tttccttaaa catccttacc tgaaggggtc agcctcttga ctgcacagac      120
cctaagccgg ttacacagct aactccact ggcctctgatt tgtgaaattg ctgctgcttg      180
attggacag gagtccaagg tgttcagctc cctctctcg tggacagaga ctctgatttg      240
agtttcacaa attctggggc cactctgtrc tggctctct gaaataaaat ccggagaatg      300
gtcagggctg tctatccat atggatcttc cgg      333

```

```

<210> 155
<211> 308
<212> DNA
<213> Homo sapien

```

```

<220>
<221> misc_feature
<222> 11... (308)
<223> n = A,T,C or G

```

```

<400> 155
actgggaaac atcaaaccca catcacagtg ttgtgtcaaa gatcatcagg gcatggatgg      60
gaaagtgctt tgggaactgt aaagtgccta acacatgato gatgattttt gtlataatat      120
ttgaatcagg gtgcatacna actctctctg ctgtctctcc tgggccccag cccagccccc      180
atcacagctc actgtctctg tcatccaggc ccagcatgta gtggttgatt ctctctgggt      240
gttttttagc tccanaagtc tctctgaagc caacaaaccc tctangtcta aggcattgctg      300
gacctggg      308

```

```

<210> 156
<211> 295
<212> DNA
<213> Homo sapien

```

```

<400> 156
accttgctcg gtgcttggaa catattagga attcaaaata cgagatgata acagtgccta      60
ttattgattt ctgagagAAC tggtagacat ttagttagag atttcttaca caggaaactga      120
gaataggaga ttatgttttg cctcattatc ctctctctat ctctctgctt cattctatgt      180
ctaattatatt ctcaatcaaa taagggttagc ataatcagga atctgaccaa ataccaatat      240
aaanccagat gtctatctct aagattttca atagaaaac aaattaaag actat      295

```

```

<210> 157
<211> 126
<212> DNA
<213> Homo sapien

```

```

<400> 157
acaaagttta atagtgtgt. cactgtgcat gtgctgaat gtgaatcca ccaattttt      60

```

gaagagcaaa acaaatctctg tcatctaatc totatcttgg gtctgtggga tatctgtccc 120
cttagt 126

<210> 158

<211> 442

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> {1}... (442)

<223> n = A,T,C or G

<400> 158

accactgggt cttggaaaca cccatcctta atacgatgat ttttctgtcg tctgaaaatg 60
aancagagcg gctgcacctt gtcagtcctt ccttccagag aaaaagagat ttgagaaagt 120
gctggggtaa ttccaccatta attcctctou ccaactcttc tgggtcttcc cttactattt 180
ctgggtgggttc tgaacaaagc aggtcatggg ttgttgaaga ttggggatcc cagtgaagta 240
natgtttgta gctttgcata cthagccctt cccacgcaca aacggaggtg cagagtcgtg 300
craaccctgt tttccagatg caugtagaca gattcacagt ggggaattct ggaagctgga 360
nacagacggg ctctttgcag agccgggact ctgagangga catgagggcc tctgctctg 420
tgttcattct ctgatgtccg gt 442

<210> 159

<211> 498

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> {1}... (498)

<223> n = A,T,C or G

<400> 159

acttccaggt aacgttgttg tttccgttga gcttgaactg atgggtgacg ttgtaggttc 60
tccaaacaaq acgtaggttg cagagcgggt agggaaagat gctgttccag ttgacactgg 120
gctgctgtgg actgttgttg attcctcact acggcccaag gttgtggaac tggcnaaaag 180
gtgtgttgtt gganttgagc tggggcggct gtggtaggtt gtgggcbctt caacaggggc 240
tgctgtggtg ccggggangt aanytgttgt gtracttgaq cttggccagc tctggaaagt 300
antantttct tctgaagge cagcgttgtt ggaagctggc ngggtcanty ttgtgtgtaa 360
cgaaccagtg ctgctgtggg tgggtgtana tcttcccaaa agcctgaagt tatgtgtcon 420
tcaggttaaa atgtggtttc agtgtccctg ggcngctgtg gaaggttcta nattgtcacc 480
aagggaataa gctgtggt 498

<210> 160

<211> 380

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> {1}... (380)

<223> n = A,T,C or G

<400> 160

```

accatgcacac agcttccctg ccaactcac agggagacat caacctctag acagggaaac      60
agcttcagga tacttccagg agacagagcc accagcagca aacaaatat tccuatgct      120
ggagcatggc atagaggagc ctganaaatg tgggtctga ggaagcatt tgagtctggc      180
caatagacat ctcatcagcc acttctgtga agagatgcc catgaccera gatgctctc      240
caaccttcc: cccatctca cacacttgag utttccactc tgtatcctc taccatctc      300
gagaaaaatg gragttgac cgaacctgtt cacaacggta gaggctgatt tctaacgaaa      360
cttctagaal. gaagcctgga      380

```

<210> 161

<211> 114

<212> DNA

<213> Homo sapien

<400> 161

```

actccacac cccctctgagc aggcggctgt cgttcaaggc gtatctggcc ttgcccgtca      60
caatgtccac tggccctcta tccacttggc gcttaatccc tcgaaagagc atgt      114

```

<210> 162

<211> 177

<212> DNA

<213> Homo sapien

<400> 162

```

accttctgaa tcgaaacaaa tgatacttag tctagcttta atatcctcat atatctcaaa      60
gtttactac tctgataatt ttgtaaacca ggtaccaga acatccagtc atacagcttt      120
tggtagata taacttggca ataaccagc ctggtgatac ataaaatcac tcaactgt      177

```

<210> 163

<211> 137

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> {1}...{137}

<223> n = A,T,C or G

<400> 163

```

catctatata gacaggcgtg aagacattca cgacaaaaac gcgaaattct atcccgtgac      60
canagaaggc agctacggct actctacat cctggcgtgg gtggccttcg cctgcacctt      120
catcagcggc atgatgt      137

```

<210> 164

<211> 469

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> {1}...{469}

<223> n = A,T,C or G

<400> 164

```

cttatcaaa tgaattttct cctgggcagc gttgtgatct ttggcaccct cgtgaactta      60
tgcaatgcat catgctatct catcctcat gaggagttcc caggagattc aaccaggaaa      120

```

tgcatggatc	tcagggaan	caaacaccca	ataaactcgg	agtggcagac	tgacaactgl	180
gagacatgca	cttgctacga	aaagaaatt	tcattgttgc	cccttgcttc	tacacctgtg	240
gggttatgaa	aggacaaactg	ccaaagaatc	ltaaggagg	aggactlcaa	gtatatcgtg	300
gtggagaaga	aggaccnasa	aaagacctgt	tctgtcagtg	aatggataat	ctaatgtgct	360
tctagttaag	acagggtctc	caggccaggg	cbattctcc	tctggcctct	aatagtcatt	420
gattgtgtag	ccatgcttat	caglaaaag	atntttgagc	aaacacttt		469

<210> 165

<211> 195

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> {1}...{195}

<223> n = A,T,C or G

<400> 165

acagtttttt	atanatatcg	acattgcagg	cacttcgtgt	cagtlccata	aaactggtag	60
atccgtctgc	atccactatt	actltagctag	agtaaaatt	attcttatag	cccatgtccc	120
tgcaggccgc	cggccgctag	ttctcgttcc	agtcctcttg	gcacacaggg	tgcaggact	180
tctctgaga	tgagt					195

<210> 166

<211> 383

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> {1}...{383}

<223> n = A,T,C or G

<400> 166

acacttttgt	agtgtggcac	atcagggggc	catacgggtc	acagtcactc	atagcctcgc	60
cgaggtcgga	gtccacacca	ccggtgtagg	tgtgctccat	cttgggcttg	gggccacct	120
ttggagaggg	gatattgtgc	acacacatgt	ccacaaagcc	tgtgaaactc	ccaaagaatt	180
tttcragacc	agcctgaagc	aggggaggat	gtccagcttc	agtcctccct	tctgcagggt	240
gatgccaaac	tctcttangg	tccgtgggaa	actgggtgtc	acntcaccta	caacctgggc	300
gangatctta	taaagaggct	ccnagataaa	ctccacgaaa	cttctctggg	agctgctagt	360
nggggccttt	ttggtgaact	tcc				383

<210> 167

<211> 247

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> {1}...{247}

<223> n = A,T,C or G

<400> 167

acagagccag	accttgggaa	taaatgaanc	agagattaag	actaaacccc	aahtcganac	60
tggagcayaa	actggagcaa	gaagtgggcu	tggggctgaa	glapagacca	aggccactgc	120

```

tatanccatc cccagagccc accttcaggg caaggcctatg gttggggcag anccagagac      180
tcattctgan tccaaagtgg tggcttgaaac actgggcatg acanagggag tgactctgac      240
tgangtc                                          247

```

```

<210> 168
<211> 273
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> (1)...(273)
<223> n = A,T,C or G

```

```

<400> 168
accttctaagt ttcttagaag tggagagatt gtatccatcc tggaaatggg tttaattcaa      60
aatccctcan ccttggtctt cactactgtc tatactgana gtgtcatgtt tccacaaagg      120
gctgacacct gagcctgnat tttaactcat ccttgagaag ccttttccag taggggtggc      180
aattcccaac ttcttgcca caagcttccc aggtctcttc ccttggaagg ctccagcttg      240
agtcccagat aaactcatgg gctgcccctgg ggc                                          273

```

```

<210> 169
<211> 431
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> (1)...(431)
<223> n = A,T,C or G

```

```

<400> 169
acagcctcgg ctcccccana ctccacagtc tcagtgcaga aagatcatct tccagcagtc      60
agctcagacc agggtnaagg gatgtgacat caacagtttc tgyttcaga acaggttcta      120
ctactgtcaa ctgacccccc atacttcttc aaaggctgtg gtaagtlttg caccaggtgag      180
ggcagcagaa aggggtant tactgatgga caccatcttc tctgtatart cccactgac      240
cttgccatgg gcaaaaggcc ctaccacaaa aacaaatagga tcaatgctgg gcaccagctc      300
adgcacatca ctgacacccg ggatygaaaa agaantgcca acttccatcc atccaaactgg      360
aaagtgatct gatactggat tcttaattac ctccaaaagg ttctggggggc catcagctgc      420
togaacactg a                                          431

```

```

<210> 170
<211> 266
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> (1)...(266)
<223> n = A,T,C or G

```

```

<400> 170
acctgtgggc tgggtgtgta tgctgtgcu ggtgtctgaa agggagttca gagggtggagc      60
tcaaggagct ctgcaggcat ttgccaanc ctctccanag canagggagc aacttaact      120
ccccgtlaga aaacacaccg attggagtc tgggaggggg agtgggggtg ggcatttgat      180

```


gtatacttgt caccatgaatg aaggagccng agagggaanga gacggaanatg anatttggcct 210
tcaaagctag ggggctggga ggtgga 256

<210> 171

<211> 1248

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> {1}...{1248}

<223> n = A,T,C or G

<400> 171

ggcagccaaa	tcataaacgg	cgaggactgc	agcccgract	cguagccctg	gcagggcgga	60
ctggtcatgg	aaaacgaatt	gttctgctcg	ggcglccctg	tgcattccga	gtgggtgctg	120
ttagccggau	actgtttcca	gaagtgaagt	cagagctcct	acaccatcgg	gctgggacctg	180
cacagtcttg	agggcgacca	ahagccaggg	agccagatgg	tggaggcccg	cctctccgta	240
cggcagccag	agtacacag	accttgctc	gctaacgacc	tcatgtctct	caagttggac	300
gaatccgtgt	ccgagctctg	caaatccgg	agcatccaga	ttgcttcgca	gtgacctacc	360
gcgggggaact	cttgccctgt	ttctggctgg	ggtctgctgg	cgaaacggcg	aatgacctacc	420
gtgtgtcagt	gcgtgaacgt	gtcggctggg	tctgaggagg	tctgcagtaa	gctctatgac	480
ccgtgttanc	ccccccagcat	gttctgcgcn	ggcggagggg	aagaccagaa	ggactcctgc	540
aacagtgact	ctggggggcc	actgabtctc	aacgggtact	tycagggcct	tgtgtctttc	600
ggaaaagccc	cgtgtggcca	agttggcgtg	ccaggtgtct	acaccacact	ctgcaaatcc	660
actgagltga	tagagaaaac	cgtccaggcc	agtttaactc	ggggactggg	aaacccatgaa	720
attgaccccc	aaatcacctc	tycggaagga	attcagggaat	atctgttccc	agccctcctc	780
ccttcaggcc	caggagtcca	ggcccccagc	ccctccctcc	tcaaaccagg	ggtacagatc	840
ccagccctc	cctccctcag	acuuaggagt	ccagaccccc	cagccctccn	tcctccagac	900
ccaggagtcc	agccctcctc	cctccagacc	caggagtcca	gaccccccag	cctctcctcc	960
ctccagaccca	gggttcagg	cccccaaccc	ctctccctcc	agactragag	gtccagagcc	1020
ccaacccctc	altccccaga	cccagaggtc	caggtcccg	ccctcctcc	ctragaccca	1080
gcagtcacat	gccacctaga	ctntccctgt	acacagtgcc	cccttggtgg	acgttgaccc	1140
aaccttacca	gltgggtttt	catttttngt	ccctttcccc	tagatccaga	aataaagttt	1200
agagagagng	caaaaaaaaa	aaabaaacaa	aaaaaaabaa	aaaaaaabaa		1248

<210> 172

<211> 159

<212> PRT

<213> Homo sapien

<220>

<221> VARIANT

<222> (1)...{159}

<223> Xaa = Any Amino Acid

<400> 172

Met	Val	Glu	Ala	Ser	Leu	Ser	Val	Arg	His	Pro	Glu	Tyr	Asn	Arg	Pro
1				5				10						15	
Leu	Leu	Ala	Asn	Asp	Leu	Met	Leu	Ile	Iys	Leu	Asp	Glu	Ser	Val	Ser
			20					25					30		
Glu	Ser	Asp	Thr	Ile	Arg	Ser	Ile	Ser	Ile	Ala	Ser	Gln	Cys	Pro	Thr
			35				40					45			
Ala	Gly	Asn	Ser	Cys	Leu	val	Ser	Gly	Trp	Gly	Leu	Leu	Ala	Asn	Gly
50						55							60		

Arg Met Pro Thr Val Leu Gln Cys Val Asn Val Ser Val Val Ser Glu
 65 70 75 80
 Glu Val Cys Ser Lys Leu Tyr Asp Pro Leu Tyr His Pro Ser Met Phe
 85 90 95
 Cys Ala Gly Gly Gly Gln Xaa Gln Xaa Asp Ser Cys Asn Gly Asp Ser
 100 105 110
 Gly Gly Pro Leu Ile Cys Asn Gly Tyr Leu Gln Gly Leu Val Ser Phe
 115 120 125
 Gly Lys Ala Pro Cys Gly Gln Val Gly Val Pro Gly Val Tyr Thr Asn
 130 135 140
 Leu Cys Lys Phe Thr Glu Trp Ile Glu Lys Thr Val Gln Ala Ser
 145 150 155

<210> 173

<211> 1265

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...[1265]

<223> n = A,T,C or G

<400> 173

```

ggcagccccc actcgcagcc ctggcaggcg gcaactgggca tggaaaaaga attgttctgc 60
tgggggctcc tgggtgcaccc gcaatgggtg ctgttagccc caactgttt ccagactcc 120
tacaccatcg gggtgggccc gcacagtctt gaggcogacc aagagccagg ggcragatg 180
gtggagggccc gctctctcgt acggcaccga gagtacaaca gacutttgct cgttaacgac 240
ctcatgtctc tcaagtttga cgaatccgtg tccgagcttg acaccatcgg gacatcagc 300
attgcttctc agtgccctac cgggggggac tcttgccctg ttctctgctg gggctcgtg 360
gcgaacgggt agtccacggg tgtgtgtctg cctctttcaa ggaggctctc tgccagtg 420
cggggggctg uccagagctc tgcgtccag gacgaatgcc taccgtgctg cagtgcgtga 480
acgtgtcggg ggtgtctgga gaggcttgra gtaagctctc tgaccgtctg taccacccca 540
gcctgttctg .ggcgggggga gggcagagac agaaggactc ctgcacaggt gartctgggg 600
ggcccttgat ctgcaacggg taattgcagg gcttctgtc ttcgggaaa gcccgtgtg 660
gccaagttag cgtgccaggg gtctacacca acctctgcaa attcaactgag tggatagaga 720
aaacgttcca ggcagttlaa ctctggggac tgggaaccca tgaaattgac ccccaaatat 780
atcttgccga aggaattcag gaatatctgt tccagcccc tctccctca ggcctaggag 840
tccagggccc cagccctccc tccctcaaac caagggtaca gatccccagc cctcctccc 900
tcagacccag gagtccagac ccccagccc ctcctcctc agacccagga gtccagcccc 960
tctccttca gacccaggag tccagacccc ctagccctc ctcctcaga cccaggggtt 1020
gagggccccc acccctctc ctctcagagtc agaggtrcaa gcccacaacc cctcgttccc 1080
cagacccaga ggttnaggtc ccagccctc ttctntcaga cccagnggtc caatgccc 1140
tagatcttcc ctgnacacag tgcctccctg tggnaagttg acccaacctt accagttgg 1200
ttttcatttt tngtccctt cccctagatc cagaaataaa gtttaagaga ngngcaaaaa 1260
aaaaa 1265
  
```

<210> 174

<211> 1459

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...[1459]

<223> n = A,T,C or G

<400> 174

gggcagccgc	acactgtttc	caggaagtay	tcagagagctc	ctacaccatc	gggctggguc	60
tgacaggtct	tgaggccgac	cangagccag	ggagccagat	ggcggaggcc	agccctcccg	120
tacggcacc	agagtacaac	agacccttgc	tcgctaacga	ccctcatgctc	atnagatttg	180
acgaatccgt	gtcccgagtct	gacaccatcc	ggagcatcag	cattgcttcc	cagtgcctta	240
ccgcggggaa	ctcttgcttc	gtttctggct	ggggtctgct	ggcgagccgg	gagctccagg	300
gtgtgtgtct	gcccctcttc	aggaggtcct	ctgcccaytc	gcgggggctg	acccagagct	360
ctggttccc	ggcagaatgc	ctccctgtgt	gcagtgcgtg	aacgtgtcgg	tggtgtctga	420
ngaggtctgc	antaaqctct	atgaccctgt	gtaccacccc	ancatgttct	gcgcgggctg	480
agggcaagac	cagaaggact	ccctgaaact	gagagagggg	aaaggggagg	gcagagccgt	540
cagggaaggg	tggaagaggg	ggagacagag	acacacaggg	ccgcacggcg	agatgcagag	600
atggagagac	acacaggggg	acagtgaaca	ctagagagag	aaatgagag	aaacagagaa	660
ataaacacag	gaataaagag	zagcaaggga	agagagagac	agaaacagac	atggggaggc	720
agaaacacac	acacatagaa	atgcaqctga	ccctcccaac	gcattggggc	tgagggtggg	780
gacctccac	caatagagaa	tcctcttata	acttttgact	ccccaaaaac	ctgactagaa	840
atagcttact	gttgacgggg	agccttacc	atgacataaa	laqctgattt	atgcatacgt	900
tttatgcatt	catgclatct	cttctgttga	attttttgat	atttcttaag	tcacagttc	960
gtctgtgaat	ttttttaa	tgttgcaact	ctcctaaaa	ttttctgatg	tgtttcttga	1020
aaaaatccaa	gtataagtg	acttctgcat	tcaaaacagg	gttgttcaag	ggtcactgt	1080
gtacccagag	ggaaacagtg	acacagattc	atagaggtga	aacacagaga	gaaacaggaa	1140
aaatcaagac	tctacaaaga	ggctgggcag	ggcggctcat	gootgtaac	ccagtcactt	1200
gggaggcgag	gcaggcagat	cacttgaggt	agggagttca	agacnagcct	ggccaaaatg	1260
gtgaaatcct	gtctgtacta	aaatbaaana	agttagctgg	atctggtggc	agggcctgt	1320
aatccagct	acttgaggag	ctgagtcagg	agaatttctt	gaatatggga	ggcagaggt	1380
gaagtgaatt	gagatcacac	cactctactc	cagctggggc	aacagagtaa	gactctgtct	1440
caaaaaaaa	aaabaaabaa					1459

<210> 175

<211> 1167

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> {1}...{1167}

<223> n = A,T,C or G

<400> 175

gggcagccct	ggcagggcgc	actggctcatg	gaaaacgaat	tgtctctgctc	gggcgtcctg	60
gtgcatccgc	agtgggtgct	gtcagccgca	cactgtttcc	agaaatccta	caccatcggg	120
ctgggctctg	acagtcttga	ggccgaccaa	gagccaggga	gcagagatgt	ggaggccagg	180
ctctccgtac	ggcaccagga	gtacaaacaga	ctcttgctcg	ctaaccgacc	catgctcacc	240
aaatttggaag	aatccgtgtc	cgagtcctgac	acatccggga	gcatacagcat	tgtctcagag	300
tgccttaccg	gggggaactc	ttgcctcgtc	tcgggtggg	gtctgctggc	gaacggcaga	360
atgcctaccg	tgtctgactg	cgtgaacgtg	tcgggtggg	ctgaggangt	ctgcagtaag	420
ctctatgac	cgctgtacca	ccnagcagag	ttctgcgcgc	gcggagggga	agacnagaa	480
gactcctgca	acgggtgactc	tgggggggccc	ctgatctgca	acgggtactt	gcagggcctt	540
gtgtcttctg	gaaaagccnc	gtgtgaccaa	cttggcgtgc	caggtgtcta	caccaaactc	600
tgcaaatctc	ctgagtggt	agagaaaac	gtccagacaa	gttaactctg	gggactggga	660
acccatgaaa	ttgacnccca	aatcatcct	gcggaangaa	ttcaggtaata	cttgttccca	720
gcccctcctc	cctcaggccc	aggagtcag	gccccagcc	cctcctcccl	caaaaccaagg	780
gtacagatcc	ccagccnctc	ctcctcaga	cccaggagtc	cagacccccc	agccctcct	840
ccttcagacc	caggagtcga	gcccctcctc	cttcagagcc	aggagtcagg	aucccccagc	900

```

ccttctctccg tcagaccacg ggggtgcaggc cccccacccc tcttctctca gagtcagagg      960
tccaggtccc caacccctcg ttccccagac ccagaggttc aggtcccaga ccttctctcc      1020
tcagaccacg cgggtccatg cccctctagan tttccctgta cccagtgccc ccttctctcc      1080
ngttgaccca acctaccag ttgggtttttt attttttgc ccttctctcc agatccagaa      1140
ataaagtnta agagagcgc aaaaaaa                                1167

```

<210> 176
 <211> 205
 <212> PRT
 <213> Homo sapien

<220>
 <221> VARIANT
 <222> (1)...[205]
 <223> Xaa - Any Amino Acid

<400> 176

```

Met Glu Asn Glu Leu Phe Cys Ser Gly Val Leu Val His Pro Gln Trp
 1      5      10      15
Val Leu Ser Ala Ala His Cys Phe Gln Asn Ser Tyr Thr Ile Gly Leu
      20      25      30
Gly Leu His Ser Leu Glu Ala Asp Gln Glu Pro Gly Ser Gln Met Val
      35      40      45
Glu Ala Ser Leu Ser Val Arg His Pro Glu Tyr Asn Arg Leu Leu Leu
      50      55      60
Ala Asn Asp Leu Met Leu Ile Lys Leu Asp Glu Ser Val Ser Glu Ser
      65      70      75      80
Asp Thr Ile Arg Ser Ile Ser Ile Ala Ser Gln Cys Pro Thr Ala Gly
      85      90      95
Asn Ser Cys Leu Val Ser Gly Trp Gly Leu Leu Ala Asn Gly Arg Met
      100      105      110
Pro Thr Val Leu His Cys Val Asn Val Ser Val Val Ser Glu Xaa Val
      115      120      125
Cys Ser Lys Leu Tyr Asp Pro Leu Tyr His Pro Ser Met Phe Cys Ala
      130      135      140
Gly Gly Gly Gln Asp Gln Lys Asp Ser Cys Asn Gly Asp Ser Gly Gly
      145      150      155      160
Pro Leu Ile Cys Asn Gly Tyr Leu Gln Gly Leu Val Ser Phe Gly Lys
      165      170      175
Ala Pro Cys Gly Gln Leu Gly Val Pro Gly Val Tyr Thr Asn Leu Cys
      180      185      190
Lys Phe Thr Glu Trp Ile Glu Lys Thr Val Gln Xaa Ser
      195      200      205

```

<210> 177
 <211> 1119
 <212> DNA
 <213> Homo sapien

<400> 177

```

ggcactcgc agccctggca ggccgactg gtcatagaaa acgaattgtt ctgctcgggc      60
gtcttggtgc atcgcagtg ggtactgtca ggcgcacact gtttcagaa ctctacac      120
atcgggctga gcctgcacag ccttgaggcc gcccaagagc cagggagcca gatggtggag      180
gccagcctct ccgtacggca cccagagtac aacagaccc tggctcgcta cgacrtcatg      240
ctcatcaagt tggacgaatc cgtgtccgag tctgacacca tccggagcat cagcatttgc      300

```

```

tcgcagtgcc ctaccacggg gaactcttgc ctggtttctg gctggggctc gctggcgaac 360
gatgctgtga ttgccatcca gtcccagact gtgggaggct gggagtgtga gaagctttcc 420
caaccctggc aggggttgac cttttcggca acllccagtg caaggacgic ctgctgratc 480
ctcactgggt gctcactact gctcactguc tcacccggag cactgtgac aactagccag 540
caccatagtt ctccgaagtc agactatcat gatlaactgt ctgactgtgc tgtctattgt 600
actaaacatg ccgatgttta ggtgaactta gcgtcacttg guctcaacca tcttgggtatc 660
cagttatcct cactgaattg agatttcttg ctccagtgtc agccattccc acataatttc 720
tgacctacag aggtgagggg tcataatagc ctccaaggat gctggtaact cctccacaaa 780
ttcatttctc ctgttgtagt gaagggtgag cctcttgag cctccnaggg tgggtgtgca 840
ggtcacatg atgaatgtat gatcgtgttc ccattaccca agguctttaa atccctcatg 900
ctcagtacac cagggcaggc ctacratlcc ttcatltagt gtatgctgtc cttccatgca 960
accacctcag gactcctgga tctctgctt agttgagctc ctgcatgctg cctccttggg 1020
gaggtgaggg agagggccta tggttcaatg ggalctgtgc agtctgaaca cctagggtgc 1080
tlaataaaca gaagctgtga tgttaaaana aaaaaaaa 1119

```

<210> 178

<211> 164

<212> PRT

<213> Homo sapien

<220>

<221> VARIANT

<222> (1) ... (164)

<223> Xaa - Any Amino Acid

<400> 178

```

Met. Glu Asn Glu Leu Phe Cys Ser Gly Val Leu Val His Pro Gln Trp
 1          5          10          15
Val Leu Ser Ala Ala His Cys Phe Gln Asn Ser Tyr Thr Ile Gly Leu
 20          25          30
Gly Leu His Ser Leu Glu Ala Asp Gln Glu Pro Gly Ser Gln Met Val
 35          40          45
Glu Ala Ser Leu Ser Val Arg His Pro Glu Tyr Asn Arg Pro Leu Leu
 50          55          60
Ala Asn Asp Leu Met Leu Ile Lys Leu Asp Glu Ser Val Ser Glu Ser
 65          70          75          80
Asp Thr Ile Arg Ser Ile Ser Ile Ala Ser Gln Cys Pro Thr Ala Gly
 85          90          95
Asn Ser Cys Leu Val Ser Gly Trp Gly Leu Leu Ala Asn Asp Ala Val
100          105          110
Ile Ala Ile Gln Ser Xaa Thr Val Gly Gly Trp Glu Cys Glu Lys Leu
115          120          125
Ser Gln Pro Trp Gln Gly Cys Thr Ile Ser Ala Thr Ser Ser Ala Arg
130          135          140
Thr Ser Cys Cys Ile Leu Thr Gly Cys Ser Leu Leu Leu Thr Ala Ser
145          150          155          160
Pro Gly Thr Leu

```

<210> 179

<211> 250

<212> DNA

<213> Homo sapien

<400> 179

```

ctggagtgcc tgggtgtttc aagcccttgc aggaagcaga atgcaccttc tgaggcacc.      60
ccagclgccc cgggcggggg gatgcggggc tgggagcacc ctggccgggc tgtgattgt      120
gcccgggact gttcatctca gttttctgt ccttttgcct cgggcaaggc vttctgtga      180
aagttcatat ctggagcttg atgtcttacc gaataaaggc ccatgctcc acccgaaaaa      240
aaaaaaaaa                                         250

```

```

<210> 180
<211> 202
<212> DNA
<213> Homo sapien

```

```

<400> 180
actagtccag tgtggcgaaa ttccattgtg ttggggccaa caaatggc. aattttaaa      60
tcacccggag cccgcccttg cccgtgcacc aagctgctgc taccgacagt atgatgutta      120
ctctgctact cggaaactat ttttatgtaa ttaatglatg ctttcttgtt tataaatgcc      180
tgatttaaaa aaaaaa      aa                                         202

```

```

<210> 181
<211> 558
<212> DNA
<213> Homo sapien

```

```

<220>
<221> misc_feature
<222> (1)...(558)
<223> n = A,T,C or G

```

```

<400> 181
cccytttkt. naggtttkk agacamccc agacctwaan ctgtgtcaca gaectcyngg      60
aatgtttagg cagtgcctagt aatttcytcg taatgattcc gttattactt tccctnattct      120
ttattccctt ttctctctga gattaatgaa gttgaaaatt gaggtgggla antacaaaaa      180
ggtagtgtga tagtataagt atctaaagtgc agatgaaagt gtgttatata tatccattca      240
aaattatgca agtttgttat tactcagggt taactaaatt aatttaatat gctgttgaa:      300
ctactctgtt ctttggttag aaaaaattat aaccaggact ttgttagttt gggaaagucca      360
attgataata ttctatgttc taaaagttag gctatcctta aattattaaq aaatatggaw      420
ttttattccc aggaatatgg kgttcatttt atgaatatta cscrygatag awgtwtgagt      480
aaaaycagtt ttgggtwaata ygtwaatatg tcmtaaataa acaakgcttl gaectatttc      540
caaaaaaaa aaaaaaa                                         558

```

```

<210> 182
<211> 479
<212> DNA
<213> Homo sapien

```

```

<220>
<221> misc_feature
<222> (1)...(479)
<223> n = A,T,C or G

```

```

<400> 182
acagggwttk grggatgcta agccccrga rwtgcttga tccaaacctg gottwttttc      60
agaggggaaa atggggccta gaagltacag macatytagy tggtyogmtg gnacccctgg      120
cctcacacag atcccgagt agctgggact acaggaacac agtcaatgaa gcaggccctg      180
ttwgcaattc aogttgcac ctccaaetta aacattcttc atatgtgatg tccctagctca      240
ctagggttaa acttccuac ccagaaaagg caactltagt aaaatcttag agtactttca      300

```

taetmttcta	agteetette	cagcttcaet	kkagagcctn	cytggggggt	gateggaant	360
ntctcttggc	tttctcaala	aartctctat	ycatctcatg	tttaalttgg	targcatara	420
awtgstgaca	aaatttaaat	gttcttggtt	mactttaaaa	aaaaaiaaaa	aaaaaiaaaa	479

<210> 183

<211> 384

<212> DNA

<213> Homo sapien

<400> 183

aggcgggagc	agaagctaaa	gccaaagccc	aagaagagtg	gcagtggcag	cautgggtgcc	60
agtaccagta	ccaataaacg	tgccagtgcg	agtgcacaga	ccagtgggtg	cttcagtgcg	120
gggtgccagcc	tgacggccac	tctcacattt	gggtctctcg	ctggcctcgg	tggaagctgg	180
gccagracca	gtggcagctc	tggtgcctgh	gglttctctc	acaagtgaag	ttttagatat	240
tgttaatcct	gocagtcttt	ctcttcagac	cagggtgcct	cctcagaaac	ctactcaara	300
cagcaactta	ggcagccact	atcaatcaat	tgaaagtgac	actctgcatt	aratctattt	360
gcatttcaa	aaaaaiaaaa	aaaa				384

<210> 184

<211> 496

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1) ... (496)

<223> n = A, T, C or G

<400> 184

accgaattgg	gaccgctggc	ttataagcga	tuatgttynt	ccrptatkar	ctcacagagc	60
agggagatug	agtctatacg	ctgaagaaat	ttgacccgat	gggacaacag	acctgctrag	120
cccatcctgc	tgggttctcc	ccagatgaca	aatactctcg	acacccgaatc	accatcaaga	180
aacgcttcaa	ggtgctcatg	anccagccac	cgrgcctctg	cctctgaggg	tcctctaaac	240
tgatgtcttt	tctgccacct	gttaccctct	ggagactccg	taaccgaact	cttcggactg	300
tgagccctga	tgctcttttg	ccagccatac	tctttggcat	ccagtctctc	gtggcgattg	360
attatgcttg	tgtgaggcga	tcatggctgg	atcaccata	aagggaacac	atttgacttt	420
ttttctctat	attttaaatt	actacmagaw	tattwmagaw	aaaatgawtt	gaaaaacttt	480
tanaaiaaaa	aaaaaa					496

<210> 185

<211> 384

<212> DNA

<213> Homo sapien

<400> 185

gctggtagcc	tatggcgkcg	cccacggagc	ggctcctgag	gccacggcac	agtgaattcc	60
caagtatcyt	gagcagcgtc	ttctaccgtc	cctacctgca	gatcttcggg	cagatccccc	120
aggaggacat	ggacgtggcc	ctcatyggag	acagcaactg	ytctgaggag	cccggtctct	180
gggcacacac	tcttggggcc	caggcgggga	cctgcgtctc	ccagtatgcc	aactggctgg	240
tggtgctgct	cctggtcalt	ttcctgctcg	tggcgaacat	cctgctgggc	aactcgtcta	300
ttgcraatgt	cagttacaca	ctcggcgaag	tacaggggca	cagcgatctc	tactgggaag	360
gcgcagcgtt	accgcctcat	cagg				384

<210> 186

<211> 577

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1) ... (577)

<223> n = A,T,C or G

<400> 186

gagttagctc	ctccacaacc	ttgatgaggt	cgtctgacgt	ggcctctcgc	ttcataccgc	60
tnccatcgtc	atautgtagg	tttgccacca	cytcctggca	tcttgggggc	gcntaatatt	120
ccaggaaact	ctcaatcaag	tcacccgtcg	tgaaacctgt	gggctgggtc	tgtcttcgcg	180
tccgtgtgaa	aggatctccc	agaaggagty	ctcgatcttc	cccacacttt	tgalgaactt	240
attgagtcga	ttctgcatgt	ccagcaggag	gltgtaccag	ctctctgaca	gtgaggtcac	300
cagccctatc	atgcctttga	mcgtgcccaa	garcacrgag	acttggtgtg	gggkkgaggt	360
ctcaccraga	ttctgcattc	ccagagagcc	gtggcacaag	acattgacaa	artcgccag	420
gtggaaaaag	amcamctcct	ggargtgctn	gocgctcttc	gtcmgttggg	ggcagcgctw	480
tccctttgac	acacaaccaa	glttaaggga	ttttcagccc	ccagaaantt	gtcatcatcc	540
agatntcgc	acagcactna	tccagttggg	attaant			577

<210> 187

<211> 534

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1) ... (534)

<223> n = A,T,C or G

<400> 187

aacatcttcc	tgtataatgc	tgtgcaatat	cgatccgactn	ttgtctggtg	agaatycatw	60
actkggaaaa	gmaacattaa	agcctgggca	ctgggtattaa	aattcaccaat	atgcacacact	120
ttcaaacagt	tgtcaatctg	ctccrynac	tttgbcatac	ccagtrtggg	ankaagggtg	180
tgccttatcc	acacctgtta	aaaggggcgt	aagcattttt	gattcaacat	ctcttttttt	240
gacacaaagt	cgaaaaaagc	aaaagttaac	agttatyaat	ttgttagcca	attcactttc	300
ttcatgggac	agggccatyt	gatttaaaaa	gcacatttgc	taatatlgag	cttygggggc	360
tgatatttga	gcggaaagag	agcctttcta	cttcaccaga	cacaactccc	ttcatattg	420
ggatgttnac	naaagtwaag	tctctwacag	atgggatgct	tttgtggcaa	ttctgtctcg	480
aggatctccc	agtttattta	ccacttgca	aagaaggcgt	ttctctcttc	aggr	534

<210> 188

<211> 761

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1) ... (761)

<223> n = A,T,C or G

<400> 188

agzaaccnag	atctctnaaa	acaaacccctc	atacctttgtg	gaacctaat	tggtgtgcgtg	60
tgtgtgtgcg	cgcacattat	atugacaggc	acatcttttt	tacttttga	aaagcttatg	120
cctctttggg	atctatatct	gtgaaagltt	taattgatctg	ccatnatgtc	ttgggggaact	180


```

ttgtcttcty tgtaatggt actagagaaa acacctatnt tatgagccan tctagttngt. 240
tttattcgac atgaaggaaa ttctccagatn acacacttne caaactctcc ctkgackarg 300
gggggcceag auuagcaaaa ctgamcataa raaacatwa cctggtgaga arttgcataa 360
acagaantwr ggtagtatac tgaatnucag catcattaaa rmgttwtktt wttctccott 420
gcacaaaaea tgtacngact tccggttgag taatgccuag ttgtcttctt tatnataaaa 480
cttgcccttc attacatggt tnaaagtgt gtggtgggc aaaaatattga aatgatggaa 540
ctgactgala aaqutgtaca aataagcagt gtgcctaaac agcaacacag taatgttgac 600
atgcttaatt cacaaatgct aallctcatta caaatgttg ctcaaatara ctttgaacta 660
ttttctctgt ttccagagc tgagatntta gcttttatgt agtatnaagt gaanaantac 720
gaazntaata acattgaaga aaaaananaa aanaaaaaa a 761

```

<210> 189

<211> 482

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(482)

<223> n = A,T,C or G

<400> 189

```

tttttttttt ttgtccgatn ctactatttt attgcaggan gtgggggtgt atgacccgca 60
caccgggggt atnagaagca agaaggaagg agggagggca cagccctctg ctgagcaaca 120
aagccgcctg ctgcttctc tgtctgtctc ctggtgagg caatgggga gacctcccc 180
aaggcagggg ccaaccagtcc aggggtggga atccagggg tgggagtggt quataagaag 240
tgaatggcac aggcacccg gtacagaccc ctgggtctct gacaggtnga ttccgacag 300
gtcattgtgc cctgccagc cacagcgta atctggaaa gacagaatgc ttcccttttc 360
aatcttggtc ngtcatngaa ngggcatttt tcaanttng gctnggtctt ggtacncttg 420
gttcggccca gctcncgtc caaaantcat tcacccnact cnaattgct tgcngnccc 480
cc

```

<210> 190

<211> 471

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(471)

<223> n = A,T,C or G

<400> 190

```

tttttttttt ttttaaaaca gtttttcaca acaaaattta ttagaagaat agtggttttg 60
aaaactctcg catccagtga gaactaacat acaccacatt ccagctngga atgtactcca 120
aatgtctggt caaatgatca aatggaaaca ttcaattotta cacatgcacg aaagaacaag 180
cgtttttgac atacaatgca caaaaaaaa aggggggggg gacccatggt attaaaattt 240
taagtactca taccatacat taagacacag ttctagtera gtcaaaaato agaactgcnt 300
tgaaaaattt catgtatgca atccaaacca agaacttnt ttggtgatcat gantnctcta 360
ctacatcnaa cttgatcatt gccaggaacn aaaggttnaa encacnngt acaaaaanaa 420
tctgtaattt anttcaact ccgtacngaa aaatntntnt tacaactcc c 471

```

<210> 191

<211> 402

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1) ... (402)

<223> n = A,T,C or G

<400> 191

gagggyattga	agggtctgttc	tastgtcggm	ctgttcagcc	accaactcta	acaagttgct	60
gtcttccact	cactgtctgt	aagcttttta	ccccagacwg	tatcttcata	aatagaccaa	120
attcttcacc	agtcacatct	tctaggacct	tttctggatto	agttagtata	agctcttccc	180
cttccttctg	taagacttca	tctggtaaa	tcttaagttt	tgtagaaagg	aattyaattg	240
ctcgttctct	aacaatgtcc	tctccttgaa	gtatttggtc	gaacaaacca	octaaagtcc	300
ctttgtgcat	ccatttttaa	tatacttaat	agggcattgk	tnaactaggt	taaattctgc	360
aagggtcato	tgtctgcaaa	agttgcgtta	gtatctctgc	ca		402

<210> 192

<211> 601

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1) ... (601)

<223> n = A,T,C or G

<400> 192

gagctcgggt	ccaatatct	ttgtctgaag	gcagcacaca	tatncagtgc	catggnaact	60
ggtctacccc	acatgggagc	agcatgccgt	agntatataa	ggtcattucc	tgagccagac	120
atgcytyttt	gagtacccgt	tgcraagtgc	tggtgattcl	yaacacacyt	ccatcccggt	180
cttttctgga	aaaactggca	cttktctgga	actagcarga	catcacttac	aaattcacc	240
acgagacact	tgaagggtgt	aacaaagcca	ytcttgcatt	gctttttgtc	ctccgggca	300
cagttgtcaa	tactaacccg	ctggtttgac	tccatccaat	ctgtgatctg	tagctctgga	360
tacatctcct	gcaggtactg	aagaacttct	tctttctgtt	caaaagcacc	tcttggtgac	420
tgtcagatca	ggttcccatc	tccaggtcgg	aatgttcaca	tggcatattt	taattccca	480
aaaacattgc	gattttaggc	tcagcaacag	caaatctctg	tccggcattg	gctgcaagag	540
cctcgaatga	gcccggccagc	gccaaaggcag	gcgcggtgag	ccccaccagc	agcagaagca	600
g						601

<210> 193

<211> 608

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1) ... (608)

<223> n = A,T,C or G

<400> 193

atcacgccc	natccacca	cgaagatgag	cttgttgact	gagaacctga	tgcggctcact	60
ggtcccgctg	tagcccccag	gactctccac	ctgctggaag	caattgatgc	tgcactcytt	120
cccaacgcag	gcagmagcgg	gscgggtcaa	tgaactccay	tctgsgcttg	gggtkgacgg	180
tkaagtgcag	gaagaggtct	accacctcgc	ggtccaccag	gatgcccag	tgtgaggagac	240
ctgcagcga	ctcctctgat	ggtcattgag	gggaagcga	tgaggcccag	ggccttgccc	300

```

agaaccttcc gectgttctc tgggttcacc tgcagctgct gccgctgaca ctccguctcg      360
gaccagcgga caaacgggct tgaacagrcg cccctccagg atgcccagtg tctcgcgctc      420
caggammgac accagcgtgt ccaggtcaat gtccgtgaag cccctccagg gtralcgctg      480
ctgcagctgt tctgtcgatg ttctccaggc acagccttgc cagctgcggc tcatcgaga      540
gtccgscctg cgtgagcagc atgaaagggt tgcgggctcg cagttcctct tcaggaaatc      600
cacgcaat.                                     608

```

```

<210> 194
<211> 392
<212> DNA
<213> Homo sapien

```

```

<220>
<221> misc_feature
<222> (1) ... (392)
<223> n = A,T,C or G

```

```

<400> 194
gacccggctg accttgcttc gcaattgtgt tgcctggcagg gaataccttg gcaaggcagyt      60
cragtccgag cagcccagga ccgctgcgcg cngaaactaa gcttgctctt ggccttcccn      120
tccgctcaca tgcagaaaca gtatcgggag cactgtgttt agagltcaga gtgaacactg      180
tttgatttta ttggggaaat tctctgttta tatagctttt cccaatgcta atttccaaac      240
aacaacaca aaataacatg ttgctctgtt aagttgtata aaagttagtg attctgtatt      300
taaaagaaat attactgtta catatactgc ttgcaatttc tctatttatt gkctctatgg      360
aaataaatat agttattaaa ggttgtrant. cc      392

```

```

<210> 195
<211> 502
<212> DNA
<213> Homo sapien

```

```

<220>
<221> misc_feature
<222> (1) ... (502)
<223> n = A,T,C or G

```

```

<400> 195
ccattkgagg ggtkaggkyc cagttycgga gtggaagaaa caggccaggga gaagtgcgtg      60
ccgagctgag gcagatgttc ccacagtga cccragagcc stgggatata gtytctgacc      120
cctcncaagg aaagaccaca ttctggggac atgggctgga gggcaggacc tagaggcacc      180
aagggaaggc cccattccgg ggtgtgtccc cgaggaggga ggyaaggggc tctgtgtgac      240
cccnagagg aaguggccct gagtccctgg atcagacacc ccttcccgty tctccnaca      300
cnaatgcaag ctacccaagg tccccctca gtcccccttc atacacctg amcyggccact      360
gscscacacc cccccagagc acgccacccg ccatggggar tgtgctcaag gartcgcnag      420
gcarcgtgga catctngtcc cagaaggggg cagaatcttc aatagangga ctgarcmett      480
gctnanaaaa aaaaanaaaa aa      502

```

```

<210> 196
<211> 665
<212> DNA
<213> Homo sapien

```

```

<220>
<221> misc_feature
<222> (1) ... (665)

```

<223> n = A,T,C or G

<400> 196

gggtacttgg	tctcattgcc	accacttagt	ggatgbcatt	tagaaccatt	ctgtctgctc	60
ccctcggag	ccttgccag	agcggacttt	gtatttgttg	gggactaact	gctgaabctt	120
wagctgtttk	gagttgatts	gcaccactgc	anccacaccc	tcaatatgaa	aacyawttga	180
actwatttat	tctcttgtga	aaagtataac	aatgaaaath	tlgttcatac	tgtatrkate	240
aagtatgatg	aaaagcaawa	gatatatatt	cttttattat	gttaaattat	gattgccatt	300
actaatcggc	aaaatgttga	gtgfatgttc	ttttcacagr	aalatatgcc	ttttgtaccl	360
tactttggtt	attttatctg	aaatgattta	caaaatcttt	aatttaagar	aatggatgtt	420
watatttatt	tcattaaatt	ctttcctkgt	ttacgtwaat	tttgaanaaa	wtgcatgatt	480
tcttgacaga	aatcgatctt	gatgctgttg	aagtagtttg	acccacatcc	ctatgagttt	540
lctttagant	gtataaaggt	tgtagcccat	ctaaacttca	agaaanaaat	gacracatac	600
tttgcaatra	ggctgaalbg	tggcatgctn	ttctaatctc	aactttataa	actagcaaan	660
aagtg						665

<210> 197

<211> 492

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1) ... (492)

<223> n = A,T,C or G

<400> 197

ttttntttct	ttttttttgc	aggaaggatc	ccattttattg	tggatgcatt	ttcacaatat	60
atgtttattg	gagcgatcca	ttatcagtga	aaagtatcca	gtgtttataa	nattttttagg	120
aaggcagatt	cacagaaact	gctngtcngc	ttgaggtttt	acctcgtana	gatnacagag	180
aattatagtc	naaccagtaa	acneggat	tactttttcaa	agagtttaaat	ccaaactgaa	240
caaaattcta	ccctgaaact	tactccatcc	aaatatttga	ataanagtc	gcagtgatar	300
atctctttct	gaactttaga	ttttctagaa	aaatatgtaa	taqtgatcag	gaagagctct	360
tgttcaaaag	tacaaanaag	caatgtttcc	ttaccatagg	cccttaattcc	aattttgate	420
caatttcaut	ccatcacggg	agtcactgct	acctgggaca	cttgtatttt	gttcatnctg	480
ancttggttt	aa					492

<210> 198

<211> 478

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1) ... (478)

<223> n = A,T,C or G

<400> 198

tttnntttgn	atttcantct	gtannaanta	ttttcattat	gttctattana	aaaatatnaa	60
tgtntccacn	acaaatcatn	ttactnagc	aagagggccan	ctacattgta	caacatarac	120
tgagtatatt	ttgaaaagga	caagttttaa	gtanacnca	attgucganc	atanacacatt	180
tatacatggc	ttgattgata	tttagcacag	canaaactga	gtgagttacc	agaaanaaat	240
natatagtc	aatcngattt	aagetaaana	acagatctta	tggtacatan	catctgtag	300
gagttgtggc	tttatgctta	ctgaaagtr	atgagtttcc	tgtacaaaga	gatyggcgta	360
agcattctat	tacctctact	ccatgggtta	gaatcgtag	cttatgttta	catatgtnc	420

gggttagaat tgtgtttagt naatttatgg agaggttcan gagaaaaatt tgatncaa 478

<210> 199
 <211> 482
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> {1}...{482}
 <223> n = A,T,C or G

<400> 199
 agtgaattgt cctccaaaca aaccccttga tcaagtttgt ggaactgaca atcagaccta 60
 tgcctagttcc tgcctctctc tgcctactaa atgcagactg gaggggacca azaaggggca 120
 tcaactccag ctggtattat ttggagcctg caaatctatt cctacttcta cggactttga 180
 agtgaattcag ttctctctac ggaatgagaga ctggctcagc aatatcctca tgcagcttga 240
 tgaagccnac tctgaacacg ctggttactc nagatgagaa ncagagaaat aaagtctaga 300
 aattttacct ggaagaaaag aggaatttng ctggggaccc tccatttga ccttctctca 360
 atggacttta agaanauact accacatgtt tctngtater tggcgcctgg ccgttctantg 420
 aactnngacn ncarccttnt ggaatanant cttagcngcn tccatgaactt gctcctctgc 480
 ga 482

<210> 200
 <211> 270
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> {1}...{270}
 <223> n = A,T,C or G

<400> 200
 cggccgcacag tgcactcca gctggggccg tggggacgaa gattctgccc gcagttgggtc 60
 cgactgcgcg gacggcggcg ggcacagtcc caggtgcagc gcygggcctt ggggtctctgc 120
 agggctgagc tgaagccgca gaggctcgtg cagcctccac gaccttgacy ccgtcgggga 180
 cagccgggac agagcccggt gaagccggga ggcctcgggg agccctcggg gaagggcggc 240
 ccgagagata cgcaggtgca ggtggccgcc 270

<210> 201
 <211> 419
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> {1}...{419}
 <223> n = A,T,C or G

<400> 201
 tttttttt ttttggatc tactgccaag acagcaggtc agcaacaagt tlattttgca 60
 gctagcaagg taacagggta gggcatggtt acatgttcag gtcaccttcc tttgtcgtgg 120
 ttgattgggt tgtctttatg ggggcggggt ggggtagggg aacncaagc anaantaaca 180
 tggagtggtt gcaacctccc tttagaacct ggttccnaaa gcttggggca gttcacctgg 240

```

tctgtagccg tttttttttt gacatcaatg ttattagaag tcaggatata ttttagagag 300
tccactgtnt ctggagggag attaggggtt ctgcccana tccaancaaa atccacntga 360
aaaagttagg tcatncaagt acngaatcc ganggcatan ttctcatant cgggtggcca 419

```

<210> 202
 <211> 503
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(503)
 <223> n = A,T,C or G

```

<400> 202
tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt 60
tggcacttaa tccattttta ttcaaaaatg tctacaaant ttnaatncnc cattatacng 120
gtatctttnc aaaatctaaa nttatttcaa atotnagcca aatcccttac ncaaatnnaa 180
taccncaaaa aatcaaaaat ataentntct ttccagcaaac ttngtcccat aatttataaa 240
aatatatacg gctgggtggtt tcaaaagtaca attatcttaa cactgcaaac ahtttctnaa 300
ggaactaaaa caaaaaaaa cactnccgca aagggttaag ggaaccaaca attcctttta 360
caacancnnc nattataaaa atcctatctc aatctctagg ggaatatata ctccacacng 420
ggatcttaac ttttactnca ctttggttat ttttttanaa ccattgtntt gggcccaaca 480
caatggnaat nccnccnncn tggactagt 509

```

<210> 203
 <211> 583
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(583)
 <223> n = A,T,C or G

```

<400> 203
tttttttttt ttttttttga cccccctctt ataaaaaaca agtccacatt ttatttctact 60
taccacatatt tttttctcaa ttgggtattag atattcaaaa ggcagctttt aaaaatcaaac 120
caaatggaaa ctgccttaga tacatctctc tttaggaatta gcttaaaatc tgcctaaagt 180
gaaaatcttc tctagctctt ttgactgtaa attttctgaat ctgttaaaac atccaaattc 240
attttctctg tctttaaaat tatctaatct tccatttttt tccctatttc aagtcaattc 300
gtttctctag cctcatttcc tagctcttat ctactattag taagtggctt ttttctaaa 360
agggaaaaaa ggaagagana atggcacaaca aaacaaacat ttctatttca tatctctacc 420
tacgttaata aatctagcatt ttgtgaagnc agctcaaaag aaggctttaga tcttttctag 480
tccattttag tcaactaaag atatcnazag tgcagaatg caaaagggtt gtgaacattt 540
attcaaaagc taatataaga tatttcacat aotcatrttt ctg 583

```

<210> 204
 <211> 589
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(589)

<223> n = A,T,C or G

<400> 204

tttttttttt	tttttttttt	tttttttttt	tttttttttt	ttganaatga	ggatcgagtt	60
tttcaactct	cagatagggc	atgaagaggg	ctcacttttc	cagcttttaa	ataacgactc	120
aattctttat	gctatctcat	atttttaagt	aaactaattg	gtcactgggt	tatctttctc	180
tgaaggaant	ctgttcattc	ttctcattca	tatagttata	tcaagtacta	ccttgcctat	240
tgagaggttt	ttcttctctc	tttccacata	tatttccatg	tgaatttgta	tcaaaccttt	300
attttctatg	aaactagaaa	ataatgtntt	cttttgcata	agaggaagga	acaatatnag	360
cattacaaaa	ctgctcgggc	tgtttgttaa	gnttatccat	tataattagt	lnggcaggag	420
ctaatacaaa	tacattttac	ngacnagcaa	tataaaaact	gaagtaacag	ttaaatatcc	480
aaataaatta	aagggaacat	tttagcctgg	gtataattag	ctaattcact	tcaagagcat	540
ttattnagaa	tgaattcaca	tgttatttct	ccttagccca	acacaaatgg		589

<210> 205

<211> 545

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(545)

<223> n = A,T,C or G

<400> 205

tttttttttt	tttttttttt	aataatcaga	acuatattta	tttttatatt	taaaattcat	60
agaaaagtgc	cttaccattt	ataaaggttt	gtttctcaga	gctatcagag	gaattagata	120
tngtcttgaa	cacccatatt	aatttgaggg	aaatucacca	aaatacctta	agtaaatcat	180
tttaagatcat	agagcttgta	agtgaagaga	taaaatttga	cctcagaaac	tctgaacatt	240
aaaaatccac	tatttagcaa	tcaattacta	tggacttctt	gctttaattt	tgtgatgaat	300
atggggtgtc	actggtaaac	caacacattc	tgaaggatag	atttaattagt	gatagattct	360
tatgtacttt	gctanattac	gtggatattg	gttgacaaag	ttctctttct	tcaatctttt	420
aaggggcngg	ngaattgagg	aagaaagaga	aaggattacg	catatgttct	ttctctctng	480
aaggattaga	tatgtttctt	ttgccaatat	taaaaaataa	ataatgttta	ctactagtga	540
aaccc						545

<210> 206

<211> 487

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(487)

<223> n = A,T,C or G

<400> 206

tttttttttt	tttttttagt	aagtctctna	tttttattat	aattcaagtc	tgggtcattt	60
catttatttag	ctctycaact	tacatattta	aattcaagaa	acgttnttct	acaactgtta	120
caattttata	atgtaagggt	caattattga	gtanatttat	tctccaaga	gtggatgtgt	180
cctttctccc	accaactaat	gaancagcaa	cattagttta	atlttattag	tagatnatcc	240
actgctgcaa	acgttaattc	tcttctccat	ccccatgtng	atatttgtgt	latgtgtgag	300
ttggtnagaa	tgcattconca	atctnacaut	caacagcaag	atgaagctag	gcntgggctt	360
tgggtgaaaa	tagactgtgt	ctgtctgaat	caaalqutct	gacctatnct	cggtgtgcaag	420
aactctctga	ccctcttctt	caaaggcngc	tgcacatttt	gtggcctctn	ttgcacttgt	480

ttcaaaa

487

<210> 207
 <211> 332
 <212> DNA
 <213> Homo sapien
 <220>
 <221> misc_feature
 <222> (1)...(332)
 <223> n = A,T,C or G

<400> 207

tgaattggct	aaaagaatgc	atttttanaa	cuagcaactc	ttatttctlt	cctttaaaaa	60
vacataguat	tcaatcccaa	atcctatcta	aagacctgac	agcttgagaa	ggctcactact	120
gcatttatag	gaccttctg	tggttctgct	gltacntttg	aantctgaca	atccttgana	180
atcctttgcat	gcagggagg	taaaaggctat	tggattttca	cagagggaana	acacagcgca	240
gaaatgaagg	ggccagggtt	actgagcttg	tccactggag	ggctcatggg	tgggacatgg	300
aaaagaaggc	agcctaggcc	ctggggagcc	ca			332

<210> 208
 <211> 524
 <212> DNA
 <213> Homo sapien
 <220>
 <221> misc_feature
 <222> (1)...(524)
 <223> n = A,T,C or G

<400> 208

agggcggtgg	gcaggaggcg	ttactgtttt	gtctcagtaa	caataaatac	aaaaagactg	60
gltgtgttcc	ggccccatcc	aaccacagag	ttgatttctc	ttgtgtgcag	agtgaactgat	120
tttaaggga	atggagcttg	tcacaatgtc	acaatgtcac	agtgtggaag	gcacactcac	180
tcccaggtga	ttcacattta	gcaavcmaca	atagctcatg	agtcataact	tgtaaatact	240
tttggcagaa	tactttttga	aacttgacga	tgataactaa	gacccaagat	atttcccaaa	300
gtaaatagaa	gtgggtcata	atatttaatta	cctgttcaca	tatgtttcca	tttacaagtc	360
atgagccccg	acactgacat	caaaactaagc	ccacttagar	tcttcaccac	cagtctgtcc	420
tgtcctcaga	caggaggctg	tcaccttgac	caaattctca	ccagtcaatc	atctatccaa	480
aaaccattac	ctgatccact	tcgggtaatg	caccaccttg	gtga		524

<210> 209
 <211> 159
 <212> DNA
 <213> Homo sapien

<400> 209

gggtgaggaa	atccagagtt	gcaatggaga	aaattccagt	gtcagcattc	tlgctccttg	60
tggcctcttc	ctacactctg	gcccagagata	ccacagtcac	acutggagcc	aaaaaggaca	120
caaaggactc	tgcacccaaa	ctgccccaga	cccccttcca			159

<210> 210
 <211> 256
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc feature
 <222> (1) ... (256)
 <223> n = A, T, C or G

<400> 210
 actccctggc agacaaagga agaggagaga gctctgttctg ttctgtgttg ttgaactgcc 60
 actgaatttc ttccacttg gactattaca tggcatttga gggactaatg gaaaaaccta 120
 tggggagatt ttanccaatt tangtntgtt aatggggaga ctggggcagg cgggagagat 180
 ttgcaggggtg naaatgggan ggctgggtty ttanatgaac agggacuatg gaggtgggca 240
 ccaggatgct aaatca 256

<210> 211
 <211> 264
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc feature
 <222> (1) ... (264)
 <223> n = A, T, C or G

<400> 211
 acattgtttt tttagatatg agcattgaga gagctctctt taacttgacc caatggaagg 60
 actggaacac ataccacat ttctgtctct agggataatt ttctgatatg gtcttgctgt 120
 atattcaagc acatctgtta tatattattc agtctcctct ttatagccta gtttagggaga 180
 gggggagatc attongaaag aggaactgaa gaaatattca agtngggaaa cagaaaaaga 240
 aaaaaaggag caaatgagaa gcct 264

<210> 212
 <211> 328
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc feature
 <222> (1) ... (328)
 <223> n = A, T, C or G

<400> 212
 acccaaaaat ccatgtctga atatttggtc tcattatttc canattcttt gattgtcaaa 60
 ggaattaatg ttgtctcagc ttggyoactt cagttaggac ctaaggatgc cagctggcag 120
 gtttatctat gcagcaacaa tattcaagca ggaacaacagg ttattggaat tgcctgctcg 180
 ttnaatttca ttcccatga ctggggatcc ttatcatcag ccagagagat tgaattttca 240
 cccctacnac tctttactct ctgganaggy ccagtggctg taactataag ctctggccaca 300
 ttttttttct ctctatttct ttgtcaga 328

<210> 213
 <211> 250
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc feature

<222> {1}... (250)
 <223> n = A,T,C or G

<400> 213

aattatgagc agagcgacat atccnagtgt agactgaata aaactgaatt ctctccagtt	60
taaagcattg ctcaactgaag ggatagaagt gactgccagg agggaaagta agccaaaggct	120
cattatgccn aagganatat acatttcaat tctccaaact tcttctcat tccaagagtt	180
ttcaatattt gcctgaacct gctgatacnc catgttaana aacaaatata tctctnacct	240
tctcatcggt	250

<210> 214
 <211> 444
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> {1}... (444)
 <223> n = A,T,C or G

<400> 214

acccagaatc caatgcctgaa tatttggttt cattattccc agatccttctg attgtcaaag	60
gatttaattgt tctctcagct tgggcaattc agttaggacc taaggatgcc agcuggcagg	120
tttatatatg cagcaacaa. attcaagcgc gacaaacagg tattggaact gccgcacgt	180
tgaatttcac tccctttgac ttgggtctct tatcatcagc canagagatt gaaattttac	240
ccctadgaat ctttactctc tggagagggc cagtgttggc agctataagc ttggccacat	300
tttttttttc ttatttcttt tgcagagat gcgatttcat calatgctan aaaccaacag	360
agtgaatttt acaaaattcc tabaganatt gtgaataaaa ccttacctat agttgccatt	420
actttgctct cctcaatata cctc	444

<210> 215
 <211> 366
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> {1}... (366)
 <223> n = A,T,C or G

<400> 215

acttatgggc agagcgacat atccaaagtgt anactgaata aaactgaatt ctctccagtt	60
taaagcattg ctcaactgaag ggatagaagt gactgccagg agggaaagta agcnaaggct	120
cattatgccn aagganatat acatttcaat tctccaaact tcttctcat tccaagagtt	180
ttcaatattt gcctgaacct gctgataagg catgttgaga aacaaatata tctctgaact	240
tctcatcggt aagcagaggc tctaggcaac atgggaacct gcaanaaaaa aacttagtaa	300
tccaagctgt tttctacact gtaacctagg ttccaaccac gctgggaata tctatactt	360
ggtgcc	366

<210> 216
 <211> 260
 <212> DNA
 <213> Homo sapien

<220>

<221> misc_feature
 <222> (1) ... (260)
 <223> n = A,T,C or G

<400> 216
 ctgtataaac agaatccac tgcangaggg agggccgggc caggagaatc tccgtctgtc 60
 cagacaggg gcttaaggag ggtctccaca ctgctnncaa gggctnttnc attcttttat 120
 taataaaag tnnaaaggg ctcttctcaa ctcttttccc ttcggctggg aattttaaaa 180
 atcaaaatt tctnaagtt ntcagctat catatacat ntatcctgaa aaagcaaat 240
 aattctcct tccctcctt 260

<210> 217
 <211> 262
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1) ... (262)
 <223> n = A,T,C or G

<400> 217
 acctacgtgg gtaagtttan aaatggtata atttcaggaa naggagcgc tataattgta 60
 tottgctat aattctctat tttcataagg aaatagcaaa ttgggtggg gggcaatgtag 120
 ggcattctac agtttygca aaatgcaatt aaatgtggaa ggacagcact gaaaatttt 180
 atgaataatc tgtatgatta tctgtctcta gactagattt atcattagcc actcacccta 240
 atactctca tgcctgtaa gt 262

<210> 218
 <211> 205
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1) ... (205)
 <223> n = A,T,C or G

<400> 218
 accaaggtgg tgcattaccg gaantggatc aagacarca tngtggcuaa cccctgagca 60
 cccctatcaa ctcccttttg tagtaaatc ggaaccttgy aatgacacg gccaaagatc 120
 aggcctcccc agttctactg acctttgtcc ttangtntna ngtccagggc tgcaggaaa 180
 anaatcagc agacacaggc gtaa 205

<210> 219
 <211> 114
 <212> DNA
 <213> Homo sapien

<400> 219
 cacctgttttg tctcagtaac aatcaataca aaaagartgg ttgtgttccg gccccatcca 60
 accacgaagt gattttctct tgtgtgcaga gtgactgatt ttaaggaca tggg 114

<210> 220
 <211> 93

<212> DNA

<213> Homo sapien

<400> 220

actagccagc acaaaagggc gggtagcctg cattgcttcc tgccttllau atttctttta	60
aantaagcat ttagtgtca gtcctactg agt	93

<210> 221

<211> 167

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> {1}...{167}

<223> n = A,T,C or G

<400> 221

actangtgca ggtgcgcaca atattttgtc gatattccct tcatcttggg ttccatgagg	60
tcttttggcc agcctgtggc tctactgtag taagtttctg ctgatgagga gccagnatgc	120
ccccactac ctccctgac gctccccana aatcacccaa cctctgt	167

<210> 222

<211> 351

<212> DNA

<213> Homo sapien

<400> 222

agggcctggt ggggagggcg gtactgacct cattagtagg aggatgcatt ctggcaccgc	60
gttttcacc tgtccccaa tccctaaaag gccatcttgc ataaagtcaa ccaacagata	120
atgtttgctg attaaaggga tggatgaaaa aaattzataa tgaatttttg cataatccaa	180
ttttctcttt tatatttcta gaagaagtgt ctttgagcct attagatccc ggggaatctt	240
taggtgagca tgattagaga gcttgtaggt tgcctttaca tatatctggc atatttgagt	300
ctogtateca acaatagat tggtaaaagt ggtattattc cattgataag t	351

<210> 223

<211> 383

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> {1}...{383}

<223> n = A,T,C or G

<400> 223

aaaacaaaca aacaaaaaaa acattcttcc attcagaaaa attatcttag ggactgatat	60
tggtaattat ggtcaattta atwrtttkt ggggcatttc cttaacattgt ctgacaaqa	120
ctaaaatgtc tglgcacaaa ttttgatttc tatttggaga ctctctatca aaagtaatgc	180
tgccaaagga agtctaagga attagtatgt tcccmccac ttgtttggag tgtgctattc	240
taaaagattt tgatttctg gaatgacact tatattttaa ctttggtggg ggaaanagtt	300
ataggaccac agtcttccct tctgatactt gtaaatteat cttttattgc atttattttg	360
accatttaagc tatatgttca aaa	383

<210> 224

<211> 320
 <212> DNA
 <213> Homo sapien

<400> 224

ccccctgaagg	cttcttggta	gaaatagta	cagttacac	caatagggaac	aacaaaaaga	60
aaaagtttgt	gacatgtat	tagggagtgt	gtacccotta	ctccccatca	aaabaaaaat	120
ggatavattg	ttaaaggata	raagggaat	atcttatcat	atgtttctaaa	agapaaaggaa	180
gagaaaaaac	tactttctct	aatgggaag	ccctaaaggt	gctttgatag	tgaaggacac	240
aaatgtggcc	gtccatccct	ctttacagtt	gcattgattc	gacacggtaa	ctgttgagat	300
tttaractcm	gcattgtgac					320

<210> 225
 <211> 1214
 <212> DNA
 <213> Homo sapien

<400> 225

gaggactgca	gccccgactc	gaagccctgg	caggcgagac	tggatcatgga	aaacgaattg	60
ttctgtctgg	gggtccctgg	gcataccgac	tgggtgctgt	caagccgcaca	ctgtttccag	120
aaactccaca	ccatcgggct	gggtctgac	agtcctgag	ccgaccaaga	gcccaggagc	180
cagatggfgg	aggtccagcc	ctcgtacgg	caacccagag	acaaacagac	cttgcctcgt	240
aaagacccca	tgtccatcaa	gttggagcga	tccgtgtccg	agtctgacac	ctatccggagc	300
atragcattg	cttcgagatg	ccctaccgng	gggaactctt	gcctcgttcc	tggctggggt	360
ctgctggcga	acggcagaa	gcctaccgtg	ctgcagtgcg	tgaacgtgtc	ggtagtggtc	420
gaggaggtct	gcagttaagc	ctatgacccg	ctgtacccac	ccagcatgtt	ctgcgcgggc	480
ggagggcaaa	acccagaagg	ctccgcaac	ggtagctctg	ggggggccct	gattctgcac	540
gggtacttgc	agggccttgc	gtctttcggg	aaagccccgt	gtggccaagc	tggcgtgcca	600
gggtgtctca	ccaaacctct	caaattcccl	gggtggatag	agaaaaacgt	ccaggccagt	660
tactctctgg	gactgggaac	ccatgaattt	gaccccaaa	tacatctctg	ggaaaggatt	720
caggaatata	tgtttccagc	ccctccctcc	tcaaggccag	gagtcacggc	ccccagcccc	780
tcctccctca	aaaccaagggt	acagatcccc	agccctccct	ccctcagacc	caggagtcra	840
gacccccag	ccctccctcc	ctcagaccca	ggagtcacag	ccctccctcc	tcagacccag	900
gagtcacagc	cccccagccc	ctccctccct	agacccaggg	gtccaggccc	ccaaacccct	960
ctccctcaga	ctcagaggtc	caagccccca	acccctccct	ccccaagccc	agaggtccag	1020
gtccccagucc	ctctctccct	agacccagcg	gtccaatgnc	acctagactc	tccctgtaca	1080
cagtgcctcc	ttgtggcagc	ctgacccaac	cttaacagtt	gggtttctct	tttttgtccc	1140
tttcccttag	atccagaaat	aaagtcctag	agaagcgcac	aaaaaaaaa	aaaaaaa	1200
aaaaaaa	aaaaa					1214

<210> 226
 <211> 119
 <212> DNA
 <213> Homo sapien

<400> 226

acccagtatg	tgcagggaga	cggaacccca	tgtgacagcc	ccctccacca	gggttcccaa	60
agaacctggc	ccagtcatca	tcattcatcc	tgaagtggtc	aaataacag	ataaccagt	119

<210> 227
 <211> 818
 <212> DNA
 <213> Homo sapien

<400> 227

acaattcata	gggacgacca	atgagggaag	ggatgaacc	cggctctccc	ccagccctga	60
tttttctac	atatgggylc	ccttttcat	ctttgcacaa	acactgggtt	ttctgagaac	120
acggacggll	cttagcaca	tttgtgaaat	ctgtgtaraa	ccgggctttg	caggggaggt	180
aattttctc	ctctggagga	aaggtggtga	ctgaraggca	gggagacagt	gacaaaggcta	240
gagaaagccc	cgtctggcct	tctctggaac	aggttggaac	ggcagacccc	tgaaaacgaa	300
gcttgtcccc	ttccaatcag	ccaattctga	gaacccccat	ctaaatttct	actggaaaag	360
agggcctcct	caggagcagt	ccaagagbtt	tcnaagataa	cgtgacacut	arcatctaga	420
ggaaagggtg	caacctcagc	ayagzagccg	agagctlaau	tctggtcgtt	tcuagagaca	480
acctgctggc	tgtcttggga	tgcgacacac	ctttgagagg	ccactacccc	atgaacttct	540
gcctccact	ggacatgaag	ctgaggacac	tgggcttcaa	cactgagttg	tcattgagagg	600
gacaggctct	gcccotcaagc	cggctgaggg	cagcaaccac	tctcctcccc	tttctcagcg	660
aaagccattc	ccacaaatcc	agaccatacc	atgaagcaac	gagaccraaa	cagtttggct	720
caagaggata	tgaggactgt	ctcagcctgg	ctttgggttg	acacuatgca	cacacacaaag	780
gtccacttct	aggttctcag	cctagatggg	agtctgtat			818

<210> 228

<211> 744

<212> DNA

<213> Homo sapien

<400> 228

actggagaca	ctgttgaact	tgatcaagac	ccagaccacc	ccaggtctcc	ttcgtgggat	60
gtcatgacgt	ttgacalacc	tttggaacga	gcctcctcct	tggaagatgg	agaccgtgt	120
tcgtggccga	cctggcctct	cctggcctgt	ttcttaagat	gggagatcac	atttcaatgg	180
taggaaaggt	ggcttngtaa	aatagaagag	cagtcactgt	ggaactacca	aatggcgaga	240
tgtctgggtg	acattggggg	gctttgggat	aaaaguttta	tgagcraact	attctctggc	300
acccagattct	aggccagttt	gttccactga	agcttttccc	acagcagtrc	acctctgcag	360
gtctggcagc	gcatgggttg	ccgggtggctc	tgtggcaaga	tcacactgag	atcgatgggt	420
gagaagagct	ggatgcttgt	ctagtgttct	tagctgtcac	gttggctcct	tcacaggttg	480
ccagacgggtg	ttggccactc	ccttctaaaa	ccagggcgcc	ctcctgggtga	cagtgarccc	540
ccgtgggatg	ccttggccca	ttccagcagc	ccagtttatg	catttcaagt	ttgggggttg	600
ttcttttctg	taatgttctt	ctgtgttgtc	agctgtcttc	atttccctgg	ctaaagcagc	660
ttgggagatg	tygaccagag	atccactcct	taagaaccag	tggcyaaaga	cactttcttt	720
cttccactctg	aagtagctgg	tggg				744

<210> 229

<211> 300

<212> DNA

<213> Homo sapien

<400> 229

cgagtctggg	ttttgtctat	aaagcttgat	ccctcctttt	ctcatccaaa	tcattgtgac	60
catfacacat	cgaataaaaa	gaaaggtggc	agacttggcc	aaagccaggc	tgacatgtgc	120
tgcagggttg	ttgtttttta	attattatlg	ttagaacagt	caacccacagt	ccctgttaat	180
ttgtatgtga	cagccaactc	tgaagaggtc	ctatttttcc	acctgcagag	gatccagtct	240
cactaggctc	ctccttggcc	tcacactgga	gtctccgcna	gtgtgggtgc	ccactgacat	300

<210> 230

<211> 301

<212> DNA

<213> Homo sapien

<400> 230

cagcagaaca	aatacaaat	tgaagagtgc	aaagatutca	taaaatctat	actgagggaat	60
gagcgacagt	tcaggaggga	gaagcttgc	gagcagctca	agcaagctga	ggagctcagg	120

caatataaag	tcoctggttca	cactcaggga	cagagagctga	cccagtttaag	ggagaaggttg	180
cggaagggga	gagatgcctc	cctctcattg	aatgagcatc	lccagggccct	cctcactccg	240
gntgaaucgg	acaaagtcaca	ggggcaggac	clccaaagaa	cagacctcgg	ccguyaccac	300
g						301

<210> 231

<211> 301

<212> DNA

<213> Homo sapien

<400> 231

gcaagcagcg	lggcaaatct	ctgtcaggtc	agctccagag	aagccatttag	tcatttlaqc	60
caggaactuu	aagtcacacat	ccttggcaac	tgaggacttg	cgcagggttag	ccttgaggat	120
ggcaacacgg	gacttctcat	caggaagtgg	gatgtagatg	agctgataca	gacggccuag	180
ctcggggctg	guaggataca	tgatgtcagg	ccggcttggt	ccgccaatga	tgaaacacatt	240
ttttcttgctg	gacatgccct	ccatttctgt	caggatctgg	ttgatgactc	ggtcagcagc	300
c						301

<210> 232

<211> 301

<212> DNA

<213> Homo sapien

<400> 232

agtaggtatt	tcgtgagaag	ttcaacacca	aaactggaac	atagttctcc	ttcaagtgtt	60
ggcgaacagc	gggttccctg	attctggaat	ataactttgt	gtaaattaac	agccacctat	120
agaagagtc	atctgctgtg	aaggagagac	agagaactct	gggttccgtc	gtcctgtccc	180
cgtgctgtac	caagtgtctg	tgccagcctg	ttacctgttc	ccactgaaaa	tcctggctaat	240
gctcttctgt	atcatttctg	attctgacaa	tcaatcaatc	aatggcctag	agcactgact	300
g						301

<210> 233

<211> 301

<212> DNA

<213> Homo sapien

<400> 233

atgactgact	tcccagtaag	gctctctaa	gggttaagt	gaggatccac	aggatttgag	60
atgctaagyo	cccagagatc	gtttgatcca	acccctctat	tttcagaggg	gaaactgggg	120
cctagaagtl	acagagcatc	tagctggctg	gctggcaccc	ctggcctcac	acagactccc	180
gagtagctgg	gactacaggc	acacagtcac	tyaagcaggc	cctgttagca	attctatgcg	240
tacaaattaa	cctgagatga	gtagagactt	tattgagaaa	gcaagagaaa	atcctatcaa	300
c						301

<210> 234

<211> 301

<212> DNA

<213> Homo sapien

<400> 234

aggtccataa	cctcagagct	catercatgat	tgatatgaat	ttaaaaatla	caagcaaaaga	60
catttttattc	atcatgatgc	tttcttttct	ttcttctttt	cgtttttctt	tttttctttt	120
tcattttccg	caacataactt	ctcaatttct	tcaggattta	aaatcttgag	ggattgatct	180
cgcctcatga	cagcaagttc	aatgtttttg	ccacttgact	gaaccacttc	caggagtgcc	240
ttgatcccca	gcttaattgg	cagatcatct	gcttcaatgg	cttcggtcag	atagttcttc	300

t

301

<210> 235
 <211> 283
 <212> DNA
 <213> Homo sapien

<400> 235

tggggctgtg catcaggcgg gtttgagaaa tattcaattc tcagcagaag ccagaatttg	60
aattccctca tcttctaggg aatcatttac caggcttggg gaggattcag acagctcagg	120
tgctttcact aatgtctctg aacttctgtc cctctttgtt catggatagt ccaataaata	180
atgttatctt tgaactgagc ctcataaggag agaataaag aactctgagt gatataaaca	240
ttaggggattc aaugaatat tagatttaag ctcacactgg tca	283

<210> 236
 <211> 301
 <212> DNA
 <213> Homo sapien

<400> 236

aggtcctccn ccaactgcct gaagcacggt taaaattggg aagaagtata gtgcagcata	60
aatactttta aatcgatcag atttccttaa ccacatcgca atctctttca ccagaagagg	120
tgggagcagc atcatttaata ccaagccgaa tgcgtaatag ataaatacaa tggatatag	180
tgggtagacg gcttcacgag tacagtgtac tgbggtatcg taatctggac ttgggttcta	240
aagcatcgtg taccagtcag aaagcatcnn cactcgacac gaacgaatat aaagaacacc	300
a	301

<210> 237
 <211> 301
 <212> DNA
 <213> Homo sapien

<400> 237

cagtggtagt ggtggtggac gtggcggttg tctggtgccc ttttttgggtg ccggtccaaa	60
actcaatttt tgttcgctcc tttttggcct ttccaatttt gtccatctca attttctggg	120
ccttggctaa tgcctcatag taggagtcct cagaccagcc atggggatca aacatatact	180
ttgggtagtt ggtgccaaagc tegtcaatgg caragaatgg atcagcttct cgtaaatcta	240
gggttccgaa attctttctt cctttggata atgtagtcca tatccattcc ctcttttate	300
t	301

<210> 238
 <211> 301
 <212> DNA
 <213> Homo sapien

<400> 238

gggacaggttt tttttttttt ttttttgatg gtgcagaccc ttgctttatt tgtctgaatt	60
gttcaccagt cagccccctg ctcagaaaac caacgggcca gctaaggaga ggaggaggca	120
ccttgagact tccggagtcg aggtcttcca gggttcccca gccatcaat cattttctgc	180
accccctgcc tgggaagcag ctccctgggg ggtgggaatg ggtgactaga agggatttca	240
gtgtgggacc cagggtctgt tctccacagt aggaggtggg agggatgact aattttttta	300
t	301

<210> 239
 <211> 239

<212> DNA

<213> Homo sapien

<400> 239

ataagcagct aggggaattct ttatttagta atgtcctaac atanaagttc acataactgc	60
ttutgtcaaa ccttgatact gagctttgtg acaccccaga aataactaag agaaggcnaa	120
cataatcct tagagatcaa gaaacattta cacagttcaa ctgtttcaaa atagctcaac	180
attcagcccag tsagtagagt gtgaatgcca gcatacacag tatacaggtc cticaygga	239

<210> 240

<211> 300

<212> DNA

<213> Homo sapien

<400> 240

ggtcctaattg aagcagcagc ttccacattt taacgcaggt ttacgggtgat actgtccttt	60
gggatctgcc ctccagtgga accttttaag gaagaaagtgy gcccaagcta agtcccacat	120
gctgggtgag ccagatgact tctgttcctt ggtcaccttc ttcaatgggg cgaatggggg	180
ctgccaggtt tttaaaatca tgcctcatct tgagacacac ggtcaccttc cctctctcac	240
gctgtgggtg tactttgatg aaaataccca ctttgttygc ctctctgaag ctataatgtc	300

<210> 241

<211> 301

<212> DNA

<213> Homo sapien

<400> 241

gaggtctggg gctgaggtct ctgggtctgg aagaggagtt ctgttgggtt ggaagccaga	60
cctcttttga ggaacttcca ccagctatgt tgggtctctt gagggaatgc aacaaggctg	120
ctcctccatg tattggaana ctgcaaaactg gactraactg gaagggaagt ctgctgccag	180
tgtgagaana cagcctgagg tgacagaaac ggaagcaaac aggaacagcc agtcttttct	240
tctctctctt gtcatacggg ctctctcag cttctctctt tgtcaggggc ctaaaaggga	300

g

301

<210> 242

<211> 301

<212> DNA

<213> Homo sapien

<400> 242

ccgaggtcct gggatgcaac caatcactct gtttcacgtg acttttatca ccatacaatt	60
tgtggcattt cctcattttc tacattgttg aatcangagt gtaaataaat gtatctcgat	120
gtcttcaaga atatacatt cctttttcac tgaacccat tcanaatata agtcaagaat	180
ctcaatatca acaaatatat caagcaaac ggaaggcaga ataactaca taatttagta	240
taagtaccca aagttttata aatcaaaaag cctantgata accattttta gaattcaatc	300

a

301

<210> 243

<211> 302

<212> DNA

<213> Homo sapien

<400> 243

aggtaagtcc cagtctgag ctcaaaagat ctggatagag cataggctca tcgacgacat	60
ggtygccccaa gctatgaaat cagagggagg ctccatctgg gcctgtaaaa acctatgatg	120

tgacgtgcag tcggactcty tggcccaagg gtatggctct ctggcatga tgaccagcgt 180
 gctggtttct cccgatggca agacagtaga agcagaggct gccacggga ctgtaccctg 240
 tcactaccgc atgttccaga aaggacagga gacgtccacc aatccattg cttrcatttt 300
 t 301

<210> 244
 <211> 300
 <212> DNA
 <213> Homo sapien

<400> 240
 gctggtttgc aagaatgaaa tgaatgattc tacagctagg aattaacctt gaaatggaaa 60
 gtcattgcant cccatttgcg ggatctgtct gtgcacatgc ctctgttagag agcagcattc 120
 ccagggaacct tggaaacagt tgacactgta aggtgtttgc tccccaggac acatccctaaa 180
 aggtgttcta atggcgaaaa cgtcttccct ctttattgac ccttcttatt tatgtgaaac 240
 actgtttgtc ttttctgtat ctttttctaa ctgtaaagt ccaattgtga aatguatatc 300

<210> 245
 <211> 301
 <212> DNA
 <213> Homo sapien

<400> 245
 gtctgagtat ttaaatgtt attgaanatta tccccuacca atgttagaag agaaagaggt 60
 tatatactta gataaaaaat gaggtgaatt actatccatt gaaatcattg tcttagaatt 120
 aaggccaggga gatattgtca ttrattgtara ctctaggaca cttagagtata gcagccctat 180
 gtcttcaaaag agcagagatg caattaaata ttgttttagca tcaaaaaggc cactcaatac 240
 agctaaataa atgaagagac taatttctaa agcaattctt tatnatttcc aaagtittaa 300
 g 301

<210> 246
 <211> 301
 <212> DNA
 <213> Homo sapien

<400> 246
 ggtccgtcct acaatgcctg ctctctgaaa gaagtcggca ctctctagaa tagctaaata 60
 aactgggctt attttaagga actatttcta gctcagatcg gttttctat ggctaaaata 120
 agtgcctctt gtgaaaatta aataaaacag ttaattcraa gccttgatat atgttaccac 180
 taacaatcat actaaatata ttttgaagta caaagtctga catgctctaa agtgacaacc 240
 caaatgtgtc ttaaaaaaca cgttctctaa aagggtatgct ttactactac aatgtagaaa 300
 c 301

<210> 247
 <211> 301
 <212> DNA
 <213> Homo sapien

<400> 247
 aggtcctttg gcagggtctc tggatcagag ctcaaaactgg agggaaaggc atttcgggta 60
 gctaaaggag gcgactggcg gragcacaac caagggaaggc aaggctgttt cccccacgct 120
 gtgtcctgtg ttcagggtgc acacacaatc ctcattggga caggatcacu catgcgctgc 180
 ccttgatgat caagggtggg gctcaagtgg attaaggggg gcaagttctg ggttccttgc 240
 cttttcaaac catgaagtca ggctctgtat ccttctttt cctaaatgat attctaacta 300
 a 301

<210> 248
 <211> 302
 <212> DNA
 <213> Homo sapien

<400> 248
 aggtccttgg agatgcattt tcaagcagaag gactctttctw ttcggaagta caccctcact 60
 attaggaaga ttcttagggg taatttttct gaggaaggag aactagccaa cttaagaatt 120
 acaggaagaa agtgggttgg aagacagcca aagaaataaa agcagattaa attgtatcag 180
 gtacattcca gctgtttggc aactccataa aaacatttca gattttaate ccaaatctag 240
 ctaatgagac tggatttttg tttttttctgt tgtgtgtcgc agagctaaaa actcagttcc 300
 c 301

<210> 249
 <211> 301
 <212> DNA
 <213> Homo sapien

<400> 249
 gtccagaggg agcacctggt gctgaactag gcttgcctg ctgtgaactt gcacttggag 60
 ccttgacgtc gctgttctcc cggaaaaacc cgaccgacct ccgggatctc cgtccggccc 120
 ccaggggagc acagcagtga ctacagagctg gtcgcacact gtgcctccct cctcacggcc 180
 catcgtaatg aatcatcttg aaaaattaat ccaccatcct ttccagattct ggatggaaag 240
 actgaatctt tgactragaa ttgtttgctg aaaaagantga tgtgactttc ttagtcattt 300
 a 301

<210> 250
 <211> 301
 <212> DNA
 <213> Homo sapien

<400> 250
 ggtctgtgac aaggacttgc aggcctgtgg aggcaagtga cccctaacac tacatttctc 60
 cttatcttta ttggcttgat aaacataatt atttctaacu ctagcttatt tccagttgcc 120
 cataagcaca tcaqtacttt tctctggctg gaatagttaa ctcaagtatg gtacatctac 180
 ctaaaagact actatgtgga ataatacata cttaatgaat attacatgac ttaaaagacta 240
 caataaaacc aaacatgctt ataacattaa gaaaaacaa aaagatacat gattgaaacc 300
 a 301

<210> 251
 <211> 301
 <212> DNA
 <213> Homo sapien

<400> 251
 gccgaggtaa tacatttggc ccagtttccc cctgcacct ctccagggcc cctgctcat 60
 agacaacctu atagagcata ggagaactgg ttgcccggg ggcaggggga ctgtctggat 120
 ggcagggggc ctcaaaaatg ccactgtcac tggcaggaaa tgcctctgag cagtacacct 180
 cattgggata aatgaaaagc ttcaagaaat ctccagggtc actctctga aggccggga 240
 cctctggagg ggggcagtgg aatcccagct ccaggatgga tctgtctgaa aagatatcct 300
 c 301

<210> 252
 <211> 301

<212> DNA

<213> Homo sapien

<400> 252

gcaaccacac	actctgttct	acgtgactct	tatcaccata	caattctgtg	catttccctca	60
ctttctacat	tgtagaatca	agagtgttaa	taastgtata	togatgtctt	caagaatata	120
tcattccttt	ttcactagga	acccattcaa	aatataagtc	aagaatctta	atatcaacaa	180
atatatcaag	caactctggg	ggcagaatca	ctaccataat	ctagtatcag	tacccaaagt	240
tttatcaatc	aaaagcccta	atgataacca	cttttagaatt	tcaatcatca	ctgtagaattc	300
a						302

<210> 253

<211> 301

<212> DNA

<213> Homo sapien

<400> 253

ttccctaaga	agatgttact	ttgttgggtc	ttgttccccc	tccatctcga	ttcttgtacc	60
caactaaca	aaaaaataa	agaaaaaatg	tgttcgcttc	tgaataataa	ctccttagct	120
tggtctgatt	gttttcagac	cttaaaatat	aaacttgttt	caaaagcttt	aatccatgtg	180
gatttttttt	cttagagaa	cataaaacat	aaaaggagca	agtcggactg	aatacctgtt	240
cccatagctg	ccacagggta	ttcctcacat	ttctccata	ggaaaatgct	cttcccaag	300
g						302

<210> 254

<211> 301

<212> DNA

<213> Homo sapien

<400> 254

cgctgcgcct	ttcccttggg	ggagggggca	ggccagaggg	ggtccaagtg	cagcacgagg	60
aacttgacca	attcccttga	agcgggtggg	ttaaacccctg	tgaatgggaa	caaatccccc	120
craaatctct	tcactttacc	ctggtggact	cctgactgta	gaattttttg	gttgaaacaa	180
gaaaaaata	agcttttggg	cttttcaagg	ttgcttaaca	ggtactgaaa	gactggcctc	240
acttaaacctg	agccaggaaa	agctgcagat	ctattaatgg	gtgtgttagt	gtgcagtgcc	300
c						302

<210> 255

<211> 302

<212> DNA

<213> Homo sapien

<400> 255

agctttttct	ttttttttct	ttttttttct	ttcattaaaa	aatagtgtct	tttattataa	60
attactgaaa	tgtttttttt	ctgaatataa	atataaatat	gtgcaaatgt	tgacttggat	120
tgggattttg	ttgagttctt	caagcatctc	ctaataccct	caaggguctg	agttaggggg	180
aggaaaaagg	actggagggt	gaatctttct	aaaaaaccaag	agtgaattgag	gcagatttga	240
aatattatta	aaaaacaa	aaacaaacaa	aaatataaga	aaaaaacccac	cccaacacac	300
aa						302

<210> 256

<211> 301

<212> DNA

<213> Homo sapien

<220>
 <221> misc_feature
 <222> {1}...{301}
 <223> n = A,T,C or G

<400> 256
 gtctccagaaa acatttgaaagg tggcttccca aagtcctaact agggatatacc cctctagcct 60
 aggaaccctcc tccccaracc tcaatccacc aaaccatcca taatgcaccc agataggccc 120
 acccccaaaa gcctgggacac cttaggcara cagttatgac caggacagac tcatctctat 180
 agggcaaatag ctgctggcaa actggcatca cctggcttgc ggggatgggg gggcagtgct 240
 gtggcctctc ggcctgggta gcaagaacat ttagggtagg cctaaagttan tctgtttagt 300
 t 301

<210> 257
 <211> 301
 <212> DNA
 <213> Homo sapien

<400> 257
 gttgtggagg aactctggct tgcctattaa gtctactga ttttcactat cccctgaatt 60
 tcccactta tttttgtctt tcaactatgc aggcctcaga agaggtctac ctgcctccag 120
 tottacctag tccagtctac cccctggagt tagaatggc atcctgaagt gaaaagtaat 180
 gtccacattac tcccttcagt gatttcttgc agnagtgcga atccctgaat gccaccaaga 240
 tottaattctt cactcttcta ctcttatctc tttagactct ctttcaaccg gagaaggctc 300
 c 301

<210> 258
 <211> 301
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> {1}...{301}
 <223> n = A,T,C or G

<400> 258
 cagcagtagt agatgccgta tgcacgacg cccagcactc ccaggatcag caccagcacc 60
 agggggcccag ccaccaggcg cagaagcaag ataaacagta ggctcaagac cagagccacc 120
 cccaggggca cagaatcca ataccaggac tgggcaaat ctccaagat cttaacactg 180
 atgtctcggg cattgaggct gtcaataana cgtgatccc ctgctgtatg gtggtgtcat 240
 tgggtgatccc tgggagcgcc ggtggagtaa cgttggtcca tggaaagcag cgcccacaac 300
 t 301

<210> 259
 <211> 301
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> {1}...{301}
 <223> n = A,T,C or G

<400> 259

```

tcatatatgc aaacaaatgc agactangcc tcaggcaggg actaaaggac atctcttggg      60
gtgtcctgaa gtgatttggg cccctggagg cagacaacta agttaggaat ccagtgggaa      120
gcaaagccat aggaagccc aggatccctt gtgatcagga agtgggcccag gaaggtctgt      180
tccagctcac atctcatctg catgcagcac ggaccggatg cgcaccactg gtcttggctt      240
ccctcccatc ttctcaagca gtgtcctctt tgagccattt gcacccttgg ctccagggtg      300
c

```

301

<210> 260

<211> 301

<212> DNA

<213> Homo sapien

<400> 260

```

ttttttttct Ccctaaggaa aaagaaggaa caagtctcat aaaaccadac aagcaatggc      60
aagggtgtctt aacttgaaaa agattagggg tcactgggtt acaagttata attgaatgaa      120
agaactgtaa cagccacagt tggccatttc atgcraatgg cagcaaacaa cagggttaac      180
tagggcaaaa taataaagtg tgtggaaagg ccgataaagt cttaataaac agactgattc      240
actgagacat cagtacctgc ccgggcgggc gctcgagccg aattctgcag atatccatca      300
c

```

301

<210> 261

<211> 301

<212> DNA

<213> Homo sapien

<400> 261

```

aaatattcga gcaaatcctg taactaatgt gtctccataa aaggctttga actcagtgaa      60
tctgcttcca tccacgattc tagcaatgac ctctoggaca tcaagctcc tcttaagggt      120
agcaccactc attccatcac attcatcagc aggaataaaa ggctcttcag aagggtccat      180
ggtgacatcc aatttcttct gataatttag attcctcaca accttcttag ttaagtgaag      240
ggcatgatga tcatccaaag ccagtggttc acttactcca gactttctgc aatgaagatc      300
a

```

301

<210> 262

<211> 301

<212> DNA

<213> Homo sapien

<400> 262

```

gaggagagcc tgttacagca ttgttaagca cagaatactc caggagtatt tgttaattgtc      60
tgtgagcttc ttgcccgaag cctctcagaa atttanaaag atgcaaatcc ctgagtccac      120
cctagacttc ctaaacagaa tctctcgggg ctgggaacctg gcactctgca ttgttaatga      180
gggtttctct gtgcacacct aattttgtgc atctttgccc taaatcctgg attagtccc      240
catcattacc cccacattat aatgggtag attcagagca gatactctcc agcaaaagaa      300
c

```

301

<210> 263

<211> 301

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1) ... (301)

<223> n - A,T,C or G

<400> 263

tttagcttgt	ggtaaatgac	tcacaaaact	gatttttaaa	tcaagttaat	gtggaattttg	60
aaattacta	cttaactcta	attcacaata	acaatggcat	taagggttga	cttgagttgg	120
ttcttagtat	tatttatggc	aaataggctc	ttaccacttg	caataaacty	gcccatcat	180
taatgactga	cttccagta	aggctctcta	aggggtaaat	angaggatcc	acaggatttg	240
agatgctaa	gccccagaga	tcgttcgata	caaccctctt	attttcagag	gggaazatgg	300
g						301

<210> 264

<211> 301

<212> DNA

<213> Homo sapien

<400> 264

aaagacgtta	aaocactcta	ctaccacttg	tcggaactctc	aaagggtaaa	tgacaaaacc	60
aatgaatgac	tctaaaaaca	atatctacat	ttaattggctt	gtagacata	aaanaacaaq	120
gtggatagat	ctagaattgt	aacattttca	gaaaaccata	acatttgaca	gatgggaaag	180
ctnaattata	gatgcaaat	tataactaaa	ctactatagt	agtaaagaaa	tacatttcac	240
acccttcata	taatttcaat	atcttggctt	gaggcaactcc	acaaatgta	tcacgtgcac	300
a						301

<210> 265

<211> 301

<212> DNA

<213> Homo sapien

<400> 265

tgrccaagtt	atgtgtaat	gtatccgcac	ccagaggtaa	auctacacty	tcattcttgt	60
cttcttgtga	cgcagtattt	cttctctggg	gagaagccgg	gaagtcttct	cctggctcta	120
catactcttg	gaagtctcta	atcaactttt	gttccatttg	tttcatttct	tcaggaggga	180
ttttcagttt	gtcaacatgt	tctctaaaca	cacttgccca	tttctgtaa	gaaatccaaq	240
cagtcraagg	ctttgacatg	tcaacaacca	gcataactag	agtatccttc	agagatacgg	300
c						301

<210> 266

<211> 301

<212> DNA

<213> Homo sapien

<400> 266

taccgtctgc	ccttctctcc	atccaggcca	tctgcgaatc	tcattgggtc	ctcctattcg	60
acaccagatc	actctttcct	ctarccacag	gcttgctatg	agcaagagac	acaacctcct	120
ctcttctgtg	ttccagcttc	tttctctgtt	cttccacccc	cttaagtctt	attcctgggg	180
atagagacac	caatacccat	aacctctctc	ctaagcctcc	ctataaccca	gggtgcacag	240
cacagactcc	tgacaactgg	taaggccaat	gaactgggag	ctcacagctg	gctgtgcctg	300
a						301

<210> 267

<211> 301

<212> DNA

<213> Homo sapien

<400> 267

aaagagcaca	ggccagctca	gcctgccttg	gccatctaga	ctcagcctgg	ctccatgggg	60
------------	------------	------------	------------	------------	------------	----

```

gttttcagtg ctgagttccat ccaggaaag ctcacctaya ccttctgagg ctgaatcttc      120
atcctcacag gcagctttctg agagcctgat attcctagcc ttgatggctt ggagtaagc      180
ctcattctga ttctctctct tcttttcttt caagttggtt ttcctcacat cctctgttc      240
aattcgttc agcttgtctg ctttagccct cattccaga agcttcttct ctttggcctc      300
t

```

<210> 268

<211> 301

<212> DNA

<213> Homo sapien

<400> 268

```

aatgtctcac tcaactactt ccagcctac cgtggcctaa ttctgggagt ttcttcttca      60
gatcttggga gagctggctt ttctdaggag aaggaggaaag gacagatgta actttggatc      120
tcgaagagga agtctaatgg aagtaattag tcaacgggtc ttgttttagac tcttgggaata      180
tgctgggtgg cttagtgagc ccttttggag aaagcaagta ttattcttaa gtagtaacca      240
cttcccattg ttctacttct taccatcatc aattgtatat catgtattct ttggagaact      300
a

```

<210> 269

<211> 301

<212> DNA

<213> Homo sapien

<400> 269

```

taacaatata cactagctat ctttttaact gtccatcatt agcaccaatg aagattcaat      60
aaaattacct ttattccacac atctcaaaac aattctgcaa attcttctgt agtttbaact      120
atagtcacag accttaata ttcaacttgt ttctatgtc tactgaaaat aagtttacta      180
ctttcttgga tattctttac aanaatttat taaaattcct ggtattatca cccccaattt      240
tacagtanga caaccacctt atgtagcttt taccatgatg ctctgtagaa gtttcaactc      300
t

```

<210> 270

<211> 301

<212> DNA

<213> Homo sapien

<400> 270

```

cattgaagag ctttttgcga acatcagaac acaagtgttt ataaaattaa ttaaggctta      60
cacaagaata catattctt ttatttctaa ggagtttaac atagatgtag ctgatgtgga      120
gagcttgttg gtgcagtgc tattggataa cactattcat ggccgaattg atcaagtcaa      180
ccaactcctt gaactggatc atcagaagaa ggggtgtgca cgatatactg cactagataa      240
tggaccaacc aactaaattc tctcccagg ctgcatcagt aaactggctt aacagaaaac      300
a

```

<210> 271

<211> 301

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(301)

<223> n = A,T,C or G

<400> 271

```

aaaagggttct cataagatca acaatttcaa taatatattg atagaaacatt ctttctcatt 60
tttatagctc atctttaggg ttgatattca gttaatgctt ccttgctgt tcttgatoca 120
gaattgcaat cacttcattca gctgtatttc gctccaattc tctataaagt ggggtccaagg 180
tgaaccacag agccacagca cactcttttc ccttggtgac tgccttcacc ccatgagggt 240
tctctcctcc agatganaac tgatcatgac ccacattttt gggf.tttata gaagcagtc 300
c

```

<210> 272

<211> 301

<212> DNA

<213> Homo sapien

<400> 272

```

taaatctgctc agccacagat aacaccaatc aaatggaaac aatcactgtc ttcaantgtc 60
ttatcagaa accaaatgag cctggaaatc tcataatacc taaacatgac gttatttagga 120
tcaataaatt cctcatgat gaggaaagaa aattctttgc gaaccccttc tgcattcaca 180
gcctcttctc caacaaatat aaccttgagt ggcttcttct aatctatgtt ctttcttttc 240
ctaaggactt ccatgcatc tctacaaata tttctctac gaacactag aattaagcag 300
g

```

<210> 273

<211> 301

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1) ... (301)

<223> n = A,T,C or G

<400> 273

```

aatgtgtgt atgtgtatct ttgggaaan aanaagacat cttgtttayt attttcttgg 60
agagagctg ggaactggat aatcacwta tttgctayta tyactttaat ctgactygaa 120
gaaccgtcta acaataaaat ttaccatgtc dtatatctct tatagtatgt ttatttcacc 180
tcttctctgt ccagagagag tatcagtgc ananatttma gggcgaamac atymattggc 240
gggacttnty ttacngagm auctgcccg agcgccctcg makengantt ccgcसानान 300
t

```

<210> 274

<211> 301

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1) ... (301)

<223> n = A,T,C or G

<400> 274

```

cttatataat cttctctaga ggcaaaagag gagatgggtc atgtagacaa ttctttgagc 60
aacagtaaat gattattaga gagaangaat ggaccaagga gacagaaatt aacttgtaaa 120
tgattctctc tggaaatctga atgagatcaa gaggccagct ttagcttgtg gaaaagtcca 180
tctaggtatg gttgcattct cgtcttcttt tctgcagtac ataattgaggc aaccgaaggc 240
aattgtgctt cttttgataa gaagctttct tggtcataac aggaatttc aganaagtc 300

```

c

301

<210> 275
 <211> 301
 <212> DNA
 <213> Homo sapien

 <220>
 <221> misc_feature
 <222> {1}...{301}
 <223> n = A,T,C or G

<400> 275
 tcggtgtcag cagcagctgg cattgaacat tgcattgtgg agcccaaac ccagaaaatg 60
 gggtgaaatt ggccaacttt ctatcaactt atgttggcua ttttgcacc aacagtaagc 120
 tggcccttct aataaaagaa aattgaaagg tttctcacta aacgggatta agtagtggag 180
 tcaagagact cccagggctc agcgtacutg cccgggcggc cgtcgaagc cgaattctgc 240
 agatcaccat cacactggcg gncgctcgan catgcactta gaagggccaa ttccgacctat 300
 a 301

<210> 276
 <211> 301
 <212> DNA
 <213> Homo sapien

<400> 276
 cgtacacata ctcaactaat aaatgacugc attgtggtct tattactata ctgattacat 60
 ctatcatgtg acttctaatt agaaatgta tccaaagaca aaacagcaga tatacaaat 120
 taaagagaca gaagatagac actaacagat aaggcaactt atacattgag aatccaaac 180
 caatacatit aacattttgg gaattgaggg ggacaaatgg aagccagatc aaatttgtgt 240
 aanaattatc agtaugtttc ccttgcttca tgtctgagaa ggtctctcct caatggggat 300
 g 301

<210> 277
 <211> 301
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> {1}...{301}
 <223> n = A,T,C or G

<400> 277
 ttctgtgatg tcagratitc attacttgcg ctatgagtgc tccctggga aattctaaag 60
 atacagaggc ctggaggaa gcagagcaac tgaatttaat taaaagaag gaaaacattg 120
 gaatcatggc actctgata ctctcccaa tcaacactct caatgcctca cctcgtct 180
 caccatagtg gggagactaa agtggccagc gatttgcctc anggtgcag tgcgttctga 240
 gtctcctgtc gattacatct gaccagttct ctttttccga agtctntccg tccaatcttg 300
 c 301

<210> 278
 <211> 301
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(301)
 <223> n = A,T,C or G

<400> 278

taccactaca	ctccagcctg	ggcaacagag	caagacctgt	ctcaaaagcat	aaaatgggaat	60
aacatatcaa	atgaaacagg	gaaaatgaag	ctgacaaattt	atggaagcca	gggcttgtca	120
cagtctctac	tgttattatg	cattacctgg	gaatttatat	aagcccttaa	taataatgcc	180
aatgaacatc	tcattgtgtg	tcacaatgtt	ctggcactat	tataagtgtc	tcacagggtt	240
tatgtgttct	tcgtaaattt	atggantagg	tartcgyccg	cgaacargct	aagccgaatt	300
c						301

<210> 279
 <211> 301
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(301)
 <223> n = A,T,C or G

<400> 279

aaagcaggaa	tgacaaagct	tgcttttctg	gtatgttcta	gggtgattgt	gacttttact	60
gttatattaa	ttgccaatat	aagtaaacat	agattatata	tgtatagtgt	ttcacaagac	120
ctagaccttt	accttccagc	caccccacag	tgcttgatat	ttcagagtca	gtcatttggt	180
atacatgtgt	agttccaaag	cacataagct	agaanaanaa	atatttctag	ggagcactac	240
catctgtttt	cacatgaat	gccacacaca	tagaactcca	acatcaattt	cattgcacag	300
a						301

<210> 280
 <211> 301
 <212> DNA
 <213> Homo sapien

<400> 280

ggtaactggag	ttttctctcc	ctgtgaaaac	gtaactactg	ttgggagctg	attgagggatg	60
tagaaagggtg	gtggaaccaa	attgtggtca	atggaaatag	gagaatatgg	ttctcactct	120
tgagaaaaaa	acctaaagatt	agcccaggga	gttgccctgt	acttcagttt	ttctgcctgg	180
gtttgatata	gttttagggt	gggtttagat	taagatctaa	attacatcag	gacaaagaga	240
cagactatta	actccacagc	taattaaagg	ggatgttccc	atgtttattt	gttaaaagcag	300
t						301

<210> 281
 <211> 301
 <212> DNA
 <213> Homo sapien

<400> 281

aggtacaaga	aggggaatgg	gaaagagctg	ctgctgtggc	attgttcaac	ttggatatcc	60
gccgagaaat	ccaaatcctg	aatgaagggg	catcttctga	aaaaggagat	ctgaatctca	120
atgtggtagc	aatggcttta	tcgggttata	cggatgagaa	gaactccctt	tgagagagaa	180
tgtgcagcad	actgcgatta	cagctaaata	acccgtattt	gtgtgtcatg	tttgcatttc	240

tgacaaagtga aacaggatct tacgatggag ttttgtatga aaacaaagtt gcagtacrtc 300
g 301

<210> 282
<211> 301
<212> DNA
<213> Homo sapien

<400> 282
caggtaactac aganttaaaa tactgacaag caagtagttt cttggcgtgc acgaattgca 60
tcagaacccc aaaaatttaag aaattcaaaa agacattttg tgggcacclg ctagcacaga 120
agcgcagaaag caaagcccag gcagaaccat gctaaccctt caagtcagcc tgcacagaag 180
cgcagaagca aagcccaggc agaaccatgc taaccttaca gctcagcctg cacagaagcg 240
cagaagcana gcccaggcag aacatgctaa ccttacagct cagcctgrac agaaagcrag 300
a 301

<210> 283
<211> 301
<212> DNA
<213> Homo sapien

<400> 283
atctgtatac ggcagacaaa ctttatarag tgtagagagg cgagcgaag gatgcaaaag 60
caatttgaag gctttataat aatatgctgc ttgaaaaaaa caatgtgtag ttgatactca 120
gtgcatctcc agacatagta aggggttgc ctgaccaatc aggtgatcat tttttctatc 180
acttcccag ttttatgcaa aaattttggt aaatttctata atggtgatat gcattcttta 240
ggaacatata acatttttaa aaatctattt tatgtgaaga ctgacagacg caatttgcctt 300
g 301

<210> 284
<211> 301
<212> DNA
<213> Homo sapien

<400> 284
caggtaacaa acgctattta gtggcltga atttgaacat ttgtggtctt catctacttt 60
gcttctgtgt tggycaaagc aacatcttcc ctaaatatat attaccaaga aaagraagaa 120
gcagatttag tttctgacaa aacaaaacagg ccaaaagggg gctgacctgg agcagagcat 180
ggtgagaggc aagggatgag agggcaagtt tgttctggac agatctgtgc ctactttatc 240
actggagtaa aagaaaacaa agttcattga tgtcgaaggc tatatacagt gttcagaatt 300
a 301

<210> 285
<211> 301
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> (1)... (301)
<223> n = A,T,C or G

<400> 285
acataccat gataggatcc cccaccatt atacgttga tgtttacata aatattcttc 60
aatgacatc agtgttttaa aaaaaatacc gaaaaatcct tctgcatccc aatctctaac 120

```

CAGGAAAGCA aatgctattt acagacctgc aagccctccc tcaaacnana ctatttctgg 180
attaaatatt tctgactttc tttagaggtca cctgactagg caaatgctat ttacgatctg 240
caaaagctgt ttgaagagtc aaagccccc tgtgaacacg atttctggac cctgtaacag 300
t 301

```

```

<210> 286
<211> 301
<212> DNA
<213> Homo sapien

```

```

<400> 286
taccactgca ttccagcttg ggtgacagag tgagactccg tctccaaaa aaactttggt 60
tgtatattat tttgacctta cagtggatca ttctagttag aaggyacagt aagatttttt 120
atcaaaatgt gtcattgccag taagagatgt tatattcttt tctcatctct tccccaccca 180
aaaataagct accatatagc ttataagtc ccaatttttg ccttttacta aaatgtgatt 240
gtttctgttc attgtgtatg ctccatcacc tataattagg aaattccatt ttttcccttg 300
t 301

```

```

<210> 287
<211> 301
<212> DNA
<213> Homo sapien

```

```

<400> 287
taccagatctg ggaactaaat attaaaaatg agtgctggctg gatatatgga gaactgttggg 60
cccagaagga acgttagagat cagatattac aacagcttly ttttgagggg tagaatatg 120
aaatgatttg gttatgaacg caccgtttag gcagcagggc cagaatcttg accctctgcc 180
ccgtgggtat ctctctccca gtttggctgc ctcatgttat caacgtattc catttctgtt 240
gttgcattgc ttgtgaagcc atcaagattt tctcgtctgt ctctctctca ttggtaatgc 300
t 301

```

```

<210> 288
<211> 301
<212> DNA
<213> Homo sapien

```

```

<400> 288
gtacacctaa ctgcaaggac agctgaggaa tgaatcgggc agccgctttt aaagaagtag 60
agtcaatagg aagacaaatt ccagttccag ctcatctctg gtatctgcaa agctgcaaaa 120
gattctttaa gacaatttca agagaatatt tctttaaagt tggcaatttg gagatcatac 180
aaaagcatct gcttttctga ttaattttag ctcatctggc cactggaaga atccaaacag 240
tctgccttaa ttttggatga atgcattgat gaaattcaat aatttagana gttcaaaaaa 300
a 301

```

```

<210> 289
<211> 301
<212> DNA
<213> Homo sapien

```

```

<220>
<221> misc_feature
<222> (1) ... (301)
<223> n = A,T,C or G

```

```

<400> 289

```

```

ggtaacactgt ttccatgtta tgtttctaca cattgctacc ttagtgctcc tggaaactta      60
gtttttgatg tctccaagta gteracccctc atttaactct ttgaaactgt atcatctttg      120
craagtaaga gtggtggcct atttcagctg ctttgacaaa atgactgggt cctgacttaa      180
cgttctataa atgaatgtgc tgaagcaaa tgcccttggt ggcggcgaan aagagaaaga      240
tgtgtttctg tctggactct ctgtggtccc ttcraatgct gtgggtttcc aaccagngga      300
a                                          301

```

<210> 290
 <211> 301
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> {1}...{301}
 <223> n = A,T,C or G

```

<400> 290
acactgagct cttcttgata aatatacaga atgcttggca tatacaagat tctatactac      60
tgactgatct gttcatttct ctacacagctc ttacccccaa aagcttttcc accctaagtg      120
ttctgacctc cttttctaatt cacagtaggg atagaggcag anccacctac aatgaacctg      180
gagttctatc aagaggcaga aacagcacag aatccccagt ttaccattcg ctagragtgc      240
tgccttgaaac aaaaaccttt ctccatgtct cattttcttc atgcctcaag taacagtgag      300
a                                          301

```

<210> 291
 <211> 301
 <212> DNA
 <213> Homo sapien

```

<400> 291
caggtaacca ttcttctat cctagaaach ttctatttca tgttgttgaa acataacaac      60
tatatcagct agatttttct tctatgttt accctgtatg gaaaacttga cacactctgc      120
tttactcttt cgtttatagg tgaatcacaa aatgtatttc tatgtattct gtagttaast      180
agccatgggt gtttacttca ttttaattat ttagcatcaa gacattatga aaaggcctaa      240
acatgagctc cacttcccc ctacctaatt agcatctgtt atttcttaac cgtaatgcct      300
a                                          301

```

<210> 292
 <211> 301
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> {1}...{301}
 <223> n = A,T,C or G

```

<400> 292
accttttagt agtaatgtct aataataaac aagaaatcaa ttttataagg tccatatagc      60
tgtattaat aacttttcaag tttaaaagat aaaaataccat catttcaat gttggtatcc      120
aaaaccaaa9 notataaccg aaagggaanaa cagatgagac ataaaatgat ttgcnagatg      180
ggaatatatg tascityatg atgttnatta aattccagtt ataatagtgg ctacacactc      240
tcactacaca cacagacccc acagtcctat atgccacaaa cacattcccc taacttgaaa      300
a                                          301

```

100

<210> 293
 <211> 301
 <212> DNA
 <213> Homo sapien

<400> 293
 ggtaccaagt gctygtgcca gccgtgtacc tgttctcact gaaaagtctg gctaattgctc 60
 ttgtgtatgc acttctgatt ctgacaaica atcaatcaat ggcctagagc actgactgtt 120
 aacacaaacg tcaactagcaa agtagcaaca gctttaagtc taatatcaas gctgttctgt 180
 gtgagatttt tttaaaaggc tacttgtata ataacctctg tcaattttta tgcacrtcg 240
 ccgcgaccac gctaagccga attctgcaga tataratcac actggcggcc gctcgggcat 300
 g 301

<210> 294
 <211> 301
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1) ... (301)
 <223> n = A,T,C or G

<400> 294
 tgacccataa caatatatac bagctatctt cttaactgtc catcattagc acaaatgaag 60
 attaatataa attaccttta ttcaaacatc tcaaaacaa tctgcaaat cttagtgaag 120
 tttactata gtcacaganc ttaantattc acattgtttt ctatgtctac tgaatatagg 180
 ttcaactact ttctgggata ttctttacaa aatcttatta aaatccctgg tattatcacc 240
 ccaattata cagtagcaca accaccttat gtatgtttta catgatagct ctgtagagg 300
 t 301

<210> 295
 <211> 305
 <212> DNA
 <213> Homo sapien

<400> 295
 gtactttttc tctccctcc tctgaattta attctttcaa ctgcgaattt gcaaggatta 60
 cacatttccc tgtgtgtat attgtgttgc aaaaaaaa gtgtctttgt ttaaaattac 120
 ttggtttgtg aatccatctt gctttttccc cattggaaat agtcattaac ccattcttga 180
 actggttaga aaacrtctga agagctagtc tatcagcacc tgcagggtga attggatgg 240
 tctcagaacc atttcaccca gacagcctgt ttctatcctg ttaataaat tagtttgggt 300
 tctct 305

<210> 296
 <211> 301
 <212> DNA
 <213> Homo sapien

<400> 296
 aggtactatg ggaagctgct aaaaataatc ttgatagtac aagtatgtac tgtgctatct 60
 cacctagtat taaactaaa ataaactgaa actctatgga ctctgaagtc atttcccttg 120
 attaataga attaataaa caatatggg aaacatgaaa ccattgcaatc tactatcaac 180
 ttgaaaaag tgattgancg aaccacttag ctctcagatg atgaacactg ataatgcat 240

tgtcatttct ataaatttta aattctgtta ataagatggc ctacagggag gaaaaagggg 300
c 301

<210> 297
<211> 300
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> (1)...(300)
<223> n = A,T,C or G

<400> 297
actgagtttt aactggacgc caagcaggca aggcctggaag gttttgcctt ctttgtgcta 60
aagggttttg aaccttgaa ggagaatcat ttggacaaga agtactaag agctagaga 120
acaaagangt gaaccagctg aaagctctcg ggggaanctt acatgtgttg ttaggcctgt 180
tccatcattg ggaatgcact ggcacacct caaaatttgt ctgggctggc ctgagtggtc 240
accgcacctc ggccgcgacc acgctaagcc gaattctgca gatatccatc acactggcgg 300

<210> 298
<211> 301
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> (1)...(301)
<223> n = A,T,C or G

<400> 298
tatggggttt gtcaaccaaa agctgatgct gagaaaggcc tccctggggc ccttcccgcg 60
ggcatctgag agacctggg ttccagtggt tctggaaatg ggtccuagtg ccgcgggctg 120
tgaagctctc agatcaatca cgggaagggg ctggcggtgg tggccacctg gaaccacctt 180
gtcctgtctg ttacatctc actaycaggt ctctcttggg cttacnati tgttccctta 240
caacagtgac ctgtgcattc tgcgtgggc tgcgtgtctt gcaggtggct ctacgcgagg 300
t 301

<210> 299
<211> 301
<212> DNA
<213> Homo sapien

<400> 299
gttttgagac ggagtttcac tcttgttggc cagactggac tggaaatggc gggctctctg 60
tcactgcacc ctctgcctcc cagggttcag caattctcc gctcagcct cccaggtagc 120
tgggatttga ggctcacgcc accatacca gctaattttt ttgtattttt agtagagacg 180
gagtttcgcc atgtcggcca gctggcttca aactcccgac ctcaagcgac ctgcttgcc 240
cggcctccca aagtgtctgg attataggca tgaatcaaca cggccagcct aaagatat 300
c 301

<210> 300
<211> 301
<212> DNA
<213> Homo sapien

<400> 300

attcagttctt	atttgctgac	ccagtatctg	taaccaggag	tgcacaaaa	tcttgccaga	60
tatgtccac	accactggg	aaaggctcc	acctggctac	tccctctatc	agctgggtca	120
gctgcattcc	acaaggttct	cagcctaattg	agtctcacta	cctgcccagtc	tcaaaactta	180
gtaaagcaag	accatgacat	tccccacgg	aaatcagagt	ttgccccacc	gtcttggtac	240
tataaagcct	gcctctaac	gtccttgctt	cttcacacca	atcccgagcg	catcccccat	300

S

301

<210> 301

<211> 301

<212> DNA

<213> Homo sapien

<400> 301

ttaatttttt	gagaggataa	aaaggacaaa	taattctagaa	atgctgtctt	ttcagttctgc	60
agaggacccc	aggtctccaa	gcaaccacat	ggccaaggyc	atgaataatt	aaaagttggc	120
gggaactcac	aaagaccctc	agagctgaga	cacccacaa	agtgggagct	cacaaagacc	180
ctcagagctg	agacacccac	aacagctggg	gctcacaaag	accttcagag	ctgagacacc	240
cacaacagca	ctcgtttcag	ctgcccacatg	tgtgaataag	gattgcaatgt	ccagzagtgt	300

t

301

<210> 302

<211> 301

<212> DNA

<213> Homo sapien

<400> 302

aggtacacat	ttagcttctg	gtaaatgact	cacnaaactg	attttaaaat	caagttaattg	60
tgaattttga	aaattactac	tttaactctaa	ttcacactaa	caatggcatt	aaggcttgac	120
ttgagttggc	tcttagctatt	atttatggta	aataggctct	taccacttgc	aaataactgg	180
ccacatcatc	aatgactgac	ttcccagtaa	ggctctctaa	ggggttaagta	ggaggtacca	240
caggatttga	gatgctaagg	ccccagagat	ogtttgatcc	aacctcttta	ttttcagagg	300

g

301

<210> 303

<211> 301

<212> DNA

<213> Homo sapien

<400> 303

aggtaccaac	tgtggaaata	ggtagaggat	catlctttct	ttccatctca	actaagtctg	60
atattgtctt	tcgacagttt	aacacatctt	cttctgtcag	agattctttc	acattagcac	120
tggctaattg	aaactacgct	tgcattgtta	aaatggctgg	ttgtgaaatg	atcataggcc	180
agtaacgggt	atgtttttct	aactgatctt	ctgctcgttc	cacaggagcc	tcaagacttc	240
catcgatttt	atatctgggg	cttagaaaag	gagttaatct	gttttccctc	ataatttacc	300

c

301

<210> 304

<211> 301

<212> DNA

<213> Homo sapien

<400> 304

acatggatgt	catcttgccg	actgtcaacc	tgaatttgta	tttgcctggc	attgcctaact	60
------------	------------	------------	------------	------------	-------------	----

tattagcttc	agtttcagct	taccacacttt	ttgtctgcaa	catgcaraas	agacagtggc	120
cttttttagtg	tatcatatca	ggaaatcatct	caatattgggt	tgtgccatta	ctggtgcagt	180
gactttcagc	cacttgggtg	aggtggaggt	ggccatattgt	ctccactgca	anattactga	240
ttttcctttt	gtaattaata	agtgtgtgtg	tgaagattct	ttgagatggg	gtatatatct	300
c						301

<210> 305

<211> 301

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> [1]...[301]

<223> n = A,T,C or G

<400> 305

gaggtacagc	gtggtcaagg	taacaagaag	aaaaaaatgt	gagtggcatc	ctgggatggg	60
cagggggaca	gacctggaca	gacacgttgt	catttgctgc	tgtgggtagg	aaaatggggg	120
taaggaggga	gaaacagata	caaatctctc	anctcagtat	taaggatatt	tcattgctag	180
aatattggta	gaaacaagaa	tacattcata	tggcaantaa	ctaaccatgg	tggaaacaaa	240
ttctgggatt	taagtgggat	accaangaaa	ttgtattaaa	agagctgttc	atgggaataag	300
a						301

<210> 306

<211> 8

<212> PRT

<213> Homo sapien

<400> 306

Val Leu Gly Trp Val Ala Glu Leu

1

5

<210> 307

<211> 637

<212> DNA

<213> Homo sapien

<400> 307

acaggggcatg	aagggaaagg	gagaggatga	ggaagcctcc	ctggggattt	ggctttggccc	60
ttgtgatcag	gtggtctatg	gggcttatcc	ctacaaagaa	gaatccagaa	atagggggcac	120
attgaggaat	gatacttgag	cccaagagag	attcaatcat	tgttttattt	gccttmtttt	180
cacaccattg	gtgagggagg	gattaccacc	ctggggttat	gaagatgggt	gaacaccccc	240
cacatagcac	cggagatatg	agatcaacag	cttcttagcc	atagagattc	acagcccaga	300
gcaggagggc	gcttgcacac	catgcaggat	gacatggggg	atgogctcgg	gatttggctg	360
aagaagcaag	gactgttaga	ggcaggcttt	atagtaacaa	gacgggtggg	caaatctctga	420
tttcctgagg	ggaatgtcat	ggtcttgcct	tactaagttt	tgagactggc	aggtagtga	480
actcattagg	ctgagaacct	tgtggaatgc	acttgaccca	scatgatagag	gaagttagcca	540
ggtagggagcc	tttcccagtg	gggtgtggac	atatctggca	agattttgtg	gcactcctgg	600
ctacagatar	tggggcagca	aataaaactg	aatcttg			637

<210> 308

<211> 647

<212> DNA

<213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(647)
 <223> n = A,T,C or G

<400> 308

acgattttca	ttatcccgta	aatcggggtca	ctcaaggggc	caaccacagc	tgggagccac	60
tgtccagggg	aagggttcata	tgggactttc	tactgcccac	gggtctctac	aggatataaa	120
ggngcctcac	agtatagac	tggtagcaaa	gaagaagaaa	caaacactga	tctctttctg	180
ccacccctct	gacccitttg	aactcctctg	cccccttaga	acaaagcctac	ctaataatctg	240
ctagagaaaa	gaccaaaca	ggcctcaaa	gatctcttac	catgaagggtc	tcaactaatt	300
cttggttaag	atgtgggttc	ccatttaggt	tctgaaatag	gggggaagg	tcaatttgct	360
catttttgt	gtggatana	tcaggatgac	caggggcag	agcaggggc	tgtttgcttt	420
gggaacaaat	gctgagcata	taaccatagg	ttatggggag	caaaacaaca	tcaaatgcac	480
tgtatcaatt	gncatyaaga	cttgaggggc	ctgaatctac	cgattcatct	taaggcagca	540
ggaccagttc	gagtggcaac	aatgcagcag	cagaaatcaat	ggaaacaaca	gaatgattgc	600
aatgtccttc	tttctctctc	gcttctgaat	tgataaaagg	ggaccgt		647

<210> 309
 <211> 460
 <212> DNA
 <213> Homo sapien

<400> 309

actttatagt	ttaggctgga	cattggaaax	aaaaaaagc	cagaacacua	tgtgatagat	60
aatatgatcg	gctgcacant	tcuagactga	tgaatgatga	acgtgatgga	ctattgtatg	120
gagcacatct	tcagcaagag	ggggaaatac	tcattatctt	tggccagcag	ttgtttgatc	180
accaaacatc	atgccagaat	actcagcaaa	ccctctcagc	tcttgagaag	tcaaatgccg	240
ggggaaattt	ttcctggcaa	ttttaatttg	actccttatg	tgagagcagc	ggctaccacg	300
ctggggctgg	ggagcgaacc	cgtcactagt	ggacatgcag	tggcagagct	cctggtaacc	360
acccagagga	atacagaagg	acatgttgtg	tgccaagcgt	gacacctgta	gcactcaaat	420
ttgtcttggt	tttgtcttcc	ggtgtgtaag	attcttaagt			460

<210> 310
 <211> 539
 <212> DNA
 <213> Homo sapien

<400> 310

acgggaactta	tcaaatana	ataggaaaag	aagaaaactc	aatattata	ggcagaaatg	60
ctaaagggttt	tcaaatatgt	caggattgga	agaaggcatg	gatanagaac	aaagtccagt	120
taggaagagag	aaacacagaa	ggaagagaca	caataaaagt	cattatgtat	tctgtgagaa	180
gtcagacagt	aagatttgtg	ggaaatgggt	tgggttgttg	tatggtatgt	attttagcaa	240
taatctttat	ggcagagaaa	gctaaaatcc	tttagcttgc	gtgaatgatc	acttgctgaa	300
ttcctcaagg	taggcatgat	gaaggagggt	ttagaggaga	caragacaca	atgaactgac	360
ctagatagaa	agccttatgt	tactcagcta	ggaaatagtga	ttctgagggc	acactgtgac	420
atgattatgt	cattacatgt	atggtagtga	tggggatgat	aggaagggaag	aacttatggc	480
atattttcac	ccccacaaa	gtcagttaaa	tattgggaca	ctaaccatcc	aggtcaga	539

<210> 311
 <211> 526
 <212> DNA
 <213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(526)

<223> n = A,T,C or G

<400> 311

caaattttag	ccaatgaat	agaattttac	aaatcaagaa	gcttattctg	gggccatttc	60
ttttgacgtt	ttctctaaac	tactaaagag	gcattaatga	cccataaatt	atattatcta	120
caattacagc	atttaaaatg	tgttcagcat	gaatcattag	ctacagggga	agctaaataa	180
attcaacatg	gantaagat	ttgtccctaa	atataatcta	caagaagact	tcgatatttg	240
tttttcacaa	gtgaagcatt	cttataaagt	gtcataacct	ttttggggaa	actatgggaa	300
aaaatgggga	aactctgaag	ggttttcaagt	atcctacctg	aagctacaga	ctccataacc	360
tctctctaca	gggagctcct	gcagccctca	cagaaatgag	tggctgagat	tcttgattgc	420
acagcaagag	cttctcctct	aaaccccttc	ccttttttagt	atctgtgtat	caagtataaa	480
agtctctataa	actgtagtnt	acttatttta	atccccaaag	cacagt		526

<210> 312

<211> 500

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(500)

<223> n = A,T,C or G

<400> 312

ctctctctc	cccacccct	gactctagag	aactggggtt	ctccragta	ctccagcaat	60
tcatttctga	aagcagttga	gccactttat	tccaaagtac	actgcagatg	ctcaaaactct	120
ccatttctcc	ttcccttcca	octgccagtt	ttgctgactc	tcaacttctc	atgagtgtaa	180
grattaagga	catttatgctt	cttcgattct	gaagacaggc	cctgctcatg	gatgactctg	240
gottcttagg	aaataatttt	tcttccaaaa	tcagtaggaa	atctaaactt	atccctcttt	300
tgcagatgtc	tacragcttc	agacatttgg	ttaagaacct	atgggaaaaa	aaaatatcct	360
tgtcaatgag	gtttcctttg	taaaccaaga	ttcttatttg	notggatag	aatatcagct	420
ctgaacgtgt	ggtaagatt	cttctgtttg	aatataggag	aatcagttt	gctgaagaagt	480
tagtcttaat	tatctatcgg					500

<210> 313

<211> 718

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(718)

<223> n = A,T,C or G

<400> 313

ggagatttgt	gtgggttcgca	gccgagggag	accaggaaga	tctgcatggt	gggaaggacc	60
tgatgataca	gaggtgagaa	ataagaaaag	ctgctgactc	tacctatcta	ggccacacac	120
ctgctgaagt	ggagataatt	aacatcacta	gaaacagcaa	gatgacanta	taatgtctaa	180
gtagtgaat	gtttttgcac	atctccagcc	cttttaata	tccacacaca	caggaagcac	240
aaaagggaagc	acagagatcc	ctgggagaaa	tgcctggccg	ccatcttggg	tcatcgatga	300
gcctcgccct	gtgccttntc	ccgcttctga	gggaaggaca	ttagaanaatg	aattgatgtg	360
ttccctaaag	gatggcagga	aaacagatcc	tgttctggat	atctatttga	acgggatctc	420

agatttggaa tgaagtcaca aagtgaagrat taccactgag agggaaaacag acgggaaaat	480
cttgatgggt cacaagacat gcaacaaaca aaatgggata ctgtgatgac acgagcagcc	540
aaatggggag gagataccac ggggcagagg tcaggattct ggcctctgctg cctaaactgtg	600
cggtatacca atcatttcta tttctacctt caaacaagct gtngaatatc tgacttaagg	660
ttcttntggc ccaatatttc atnatccacc cctctntttt aannttantc caaantgt	718

<210> 314

<211> 358

<212> DNA

<213> Homo sapien

<400> 314

gtttatttac attacagaaa aacatcaag acaatgtata ctatttcana tatatccata	60
cataatcnaa tatagctgta gtacatgttt tcattgggtg agattaccac aaatgcagg	120
caacatgtgt agatctcttg tcttattctt ctgtctataa tactgtattg ttagtccaa	180
gctctcggtg gtccagccac tgtgaaacat gctcccttta gattaaccctc gtggacgttc	240
ttgttcttat gctgaactgt agtgcctctg attttgcttc tgtctgtgaa ttctgttct	300
tctggggcat tctcttctga tgcagaggac caccacacag atgacagcaa tctgaatt	358

<210> 315

<211> 341

<212> DNA

<213> Homo sapien

<400> 315

taccacctcc ccgttggcac tgatgagtcg catcaccatg gtcaccagca ccattgaaggc	60
ataggtgatg atgaggacat ggaatgggac cccaaggatg gctgtccaa agagcgagt	120
gaccccatc ctgaagatgt ctggaaacct taccagcagg atgatgatg cccaatgac	180
agtcaccagc tcccagacca gccggatata gtccttaggg gtcattgtag ctccctgaag	240
tagcttctgc tgaagaggg tgttgtcccg ggggctctg cggttattgg tctgggctt	300
gagggggcgg tagatgcagc acatggctga gcaagatgat t	341

<210> 316

<211> 151

<212> DNA

<213> Homo sapien

<400> 316

agactgggca agactcttac gcccacact gcaatctggc cttgttgccg tatccattta	60
tgtgggcttt tctcaggttt ctgattataa acaccactgg agcgatgtgt tgactggact	120
cattcagggg gctctgggtt caatatctag t	151

<210> 317

<211> 151

<212> DNA

<213> Homo sapien

<400> 317

agaactagtg gatcccaatg aaataacctg aacatataat ggcatttata aatggctcaa	60
atcttcattt atctctggcc ttaaccttgg ctcttgaggc tgcggccagg agatcccagg	120
ccagggtctt gttcttgcca caactgcttg a	151

<210> 318

<211> 151

<212> DNA

<213> Homo sapien

<400> 318

```
actggtggga ggcgctgtt agttggctgt tttcagaggg gtctttcggg gggacctctt    60
gtgcagagct ggagtgctct tattctctggc gggagaccgc acattccact gctgaggctg    120
tgggggcggg ttatcaggca gtgataaaca t                                     151
```

<210> 319

<211> 151

<212> DNA

<213> Homo sapien

<400> 319

```
aactagtggg tccagagcta taggtacagt gtgatctcag ctttgcraac acatcttcta    60
catagctagt actaggtatt aatagatatg taagagaaaga aatcacacca ttaataatgg    120
taagattggg ttatgtgat tttagtgggt a                                     151
```

<210> 320

<211> 150

<212> DNA

<213> Homo sapien

<400> 320

```
aactagtggg tccactagtc cagtgtgggt gaattccatt gtgttggggg tctagatcgc    60
gagcggctgc ccttttcttt tttttttttg ggggggaatt tttttctttt aatagttatt    120
gagtgttcta cagcttacag taaatccat                                     150
```

<210> 321

<211> 151

<212> DNA

<213> Homo sapien

<400> 321

```
agcaactttt tttttcatcc aggtatcttt aggccttagg tttctcttca caatgcagtt    60
tagggtggca ttgtaccag ctatggcata ggtgttaacc aaaggctgag taacatggg    120
tgctctgag aatcaaatg ctcatacac t                                     151
```

<210> 322

<211> 151

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1) ... (151)

<223> n = A, T, C or G

<400> 322

```
atcagcctc tctcctgtt tcttgcttc cttttcttc ttcttasatt ctgcttgagg    60
tttgggcttg gtcagtttgc cacaggctt ggagatggcg acagtcttct ggcattcggc    120
attgtgcagg gtcgcttca nacttcragt t                                     151
```

<210> 323

<211> 151

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(251)

<223> n = A,T,C or G

<400> 323

tgaggacttg tktttctttt ctttattttt aatcctotta ckttgtaa atattgccta	60
nagactrant taactnccag ttgtgggtt twtgggagaa atgtaactgg acagttagct	120
gttcaatyna aaagacactt ancccatgtg g	151

<210> 324

<211> 461

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(461)

<223> n = A,T,C or G

<400> 324

acctgtgtgg aatttcagct ttctcatgc aaagagatrt tgtatccccg gctacttga	60
agaagtggc agctaaagga atccaggttg ttggttgga cgttaataac ttgatgaaa	120
eyagttacta cgaatcccat cttgtttcca gctatatac tgacagcat gtagaagact	180
gcgaacctca cttctagat ttacaggttg gacgaacagg gtacagaac tgccaggggc	240
ctcatatagg gatataaaa taccctttgt gctacccagg cctggggga ttaggtgact	300
caracaaatg caatagtttg cactgcatt ttacctgaa ccaagctaa acccgggtt	360
gccacctgc accatggcat gccagagttc aactctgtg ctcttgaaa tcgggtctga	420
aaaacgcac aagagccct gccctgcct agctganga c	461

<210> 325

<211> 400

<212> DNA

<213> Homo sapien

<400> 325

acactgtttc catgttatgt ttctacacat tgctacctca gtgcccctgg aaacttagct	60
tttgatgtct ccaagtagtc cacttccatt taactctttg aaactgtatc atctttgcca	120
agtaagagtg gtggcctatt tcaactgttt tgacaaaatg actggctcct gacttaacgt	180
cttatataatg aatgugctga agcaaatgac cratggctgg gcgaagaag agaaagatgt	240
gttttgtttt ggactctctg tggtrccttc caatgctgtg ggttctccac caggggaggg	300
gtcccttttg catgccaag tgcataaac atgagcarta cgtaccatg gtctgcctc	360
ctggccaagc aggtctgttt gcaagaatga aatgaatgat	400

<210> 326

<211> 1215

<212> DNA

<213> Homo sapien

<400> 326

ggaggactgc agnccgcact cgcagccctg gcaggcgga ctggtcatgg aaaaagaa	60
gttctgctcg ggcgtcttg tgcatacga gtgggtgttg tcaagccgac actgtttcca	120
gaactctac accatcgggc tgggcttgca cagctctgag gccgaccaa agccaggag	180

ccaghtggtg	gaggccagcc	tctccgtacg	gcacccagag	tacaacagac	ccttgctcgc	240
taacgarctc	atgctcatca	agttggacya	atccgtgtor	gagtctgaca	ccatccggag	300
catcagcatt	gcttcgcagt	gccctarccr	ggggaactct	tgcttcgltt	ctggctgggg	360
tctgctggcg	aacggcagaa	tgccctaccgt	gctgcagtyc	gtgaacgtgt	cggtggtgtc	420
tgaggaggtc	tgcagtaagr	tctatgaccc	gctgtaccac	cccagcatgt	tctgcgccgg	480
cgaggggcag	gaccagaagg	actcccgcaa	cggtgactct	ggggggcccc	tgatctgcac	540
cggttacttg	caggcccttg	tgtctttcgg	aaaagccccc	tgtggccaaq	ttggcgtgcc	600
aggtgtctac	acraacctct	gcaaattcac	tgagtggata	gagaaacccg	tccaggccag	660
ttaactctgg	ggactgggaa	cccctgaaat	tgacccccaa	atcacatcct	cggaagggaat	720
tcaggaatat	ctgttcccag	ccrctcctcr	ctcaggccca	ggagtccagg	ccccagccc	780
ctctcctctc	aaaacaaagg	tacagatccc	cagccccctc	tccctcagar	ccaggagtcc	840
agacccccca	grrrctctct	cctcagaacc	aggagtccag	ccctctctcc	ctcagaacca	900
ggagtccaga	ccccccagcc	cctcctcctt	cagacccagg	ggtccaggcc	cccaacccct	960
cctccctcag	actcagaggt	ccaagccccc	aacccctcct	tcuccagacc	cagaggtcca	1020
ggtcccagcc	cctcctcctt	cagacccagc	ggtccaatgc	cacctagact	ctcctgtlac	1080
acagtgcctc	cttgtggcac	gttgacccaa	ccttaaccgt	tggtttttca	ttttttgtcc	1140
ctttccctca	gatccagaaa	tcaagttcta	gagaagcgca	aaaaaanaaa	aaaaaanaaa	1200
aaaaaanaaa	aaaaa					1215

<210> 327

<211> 220

<212> PRT

<213> Homo sapien

<400> 327

Glu	Asp	Cys	Ser	Pro	His	Ser	Gln	Pro	Tyr	Gln	Ala	Ala	Leu	Val	Met
1				5				10						15	
Glu	Asn	Glu	Leu	Phe	Cys	Ser	Gly	Val	Leu	Val	His	Pro	Gln	Trp	Val
			20					25					30		
Leu	Ser	Ala	Ala	His	Cys	Phe	Gln	Asn	Ser	Tyr	Thr	Ile	Gly	Leu	Gly
		35					40					45			
Leu	His	Ser	Leu	Glu	Ala	Asp	Gln	Glu	Pro	Gly	Ser	Gln	Met	Val	Glu
		50				55					60				
Ala	Ser	Leu	Ser	Val	Arg	His	Pro	Glu	Tyr	Asn	Arg	Pro	Leu	Leu	Ala
65					70					75					80
Asn	Asp	Leu	Met	Leu	Ile	Lys	Leu	Asp	Glu	Ser	Val	Ser	Glu	Ser	Asp
				85					90						95
Thr	Ile	Arg	Ser	Ile	Ser	Ile	Ala	Ser	Gln	Cys	Pro	Thr	Ala	Gly	Asn
			100					105					110		
Ser	Cys	Leu	Val	Ser	Gly	Trp	Gly	Leu	Leu	Ala	Asn	Gly	Arg	Met	Pro
		115					120					125			
Thr	Val	Leu	Gln	Cys	Val	Asn	Val	Ser	Val	Val	Ser	Glu	Glu	Val	Cys
		130				135					140				
Ser	Lys	Leu	Tyr	Asp	Pro	Leu	Tyr	His	Pro	Ser	Met	Phe	Cys	Ala	Gly
145				150						155					160
Gly	Gly	Gln	Asp	Gln	Lys	Asp	Ser	Cys	Asn	Gly	Asp	Ser	Gly	Gly	Pro
			165						170					175	
Leu	Ile	Cys	Asn	Gly	Tyr	Leu	Gln	Gly	Leu	Val	Ser	Phe	Gly	Lys	Ala
		180						185					190		
Pro	Cys	Gly	Gln	Val	Gly	Val	Pro	Gly	Val	Tyr	Thr	Asn	Leu	Cys	Lys
		195					200					205			
Phe	Thr	Glu	Trp	Ile	Glu	Lys	Thr	Val	Gln	Ala	Ser				
		210				215					220				

<210> 328

<211> 234
 <212> DNA
 <213> Homo sapien

<400> 328
 cgtctgtctc tggtagctgc agccaaatca taaarggcga ggartgcaga ccgcactcgc 60
 agccctygca ggcggcactg gtcattgaaa argaattgtt ctgtcgggc gtcttggtgc 120
 atcgcagtg ggtgctgtca gccacacact gttccagaa ctctacacc atcgggctgg 180
 gcctgcacag tcttgaggcc gcccaagagc caggagacca gatggtggag gcca 234

<210> 329
 <211> 77
 <212> PRT
 <213> Homo sapien

<400> 329
 Leu Val Ser Gly Ser Cys Ser Gln Ile Ile Asn Gly Glu Asp Cys Ser
 1 5 10 15
 Pro His Ser Gln Pro Trp Gln Ala Ala Leu Val Met Glu Asn Glu Leu
 20 25 30
 Phe Cys Ser Gly Val Leu Val His Pro Gln Trp Val Leu Ser Ala Thr
 35 40 45
 His Cys Phe Gln Asn Ser Tyr Thr Ile Gly Leu Gly Leu His Ser Leu
 50 55 60
 Glu Ala Asp Gln Glu Pro Gly Ser Gln Met Val Glu Ala
 65 70 75

<210> 330
 <211> 70
 <212> DNA
 <213> Homo sapien

<400> 330
 cccaacacaa tggcccgatc ccattccctga ctccggccctc aggatcgctc gtctctggta 60
 gctgcagcna 70

<210> 331
 <211> 22
 <212> PRT
 <213> Homo sapien

<400> 331
 Gln His Asn Gly Pro Ile Pro Ser Leu Thr Pro Pro Ser Gly Ser Leu
 1 5 10 15
 Val Ser Gly Ser Cys Ser
 20

<210> 332
 <211> 2507
 <212> DNA
 <213> Homo sapien

<400> 332
 tgggtgcgct gcagccggca gagatgggtg agctcatgtt cccgctggtg ctctctcttc 60
 tgccttctt tctgcatatg gctgcgcccc aaatcaggaa aatgctgtcc agtggggtgc 120

gtacatcaac	tggtcagctt	cctgggaaag	tagt.tgtggt	cacaggagct	aatncaggta	180
tcgggaagg	gacagccaaa	gagctggctc	agxgaggagc	tcgagtatat	ttagcttgc	240
gggatgtgga	aaagggggaa	ctgggtggua	aagagatcca	gaucacgaca	gggaaccagc	300
aggtgttggt	gcggaaactg	gacutgtctg	atactaagtc	tattcgagct	tttgctaaag	360
gcttcottagc	tgaggaaaag	caectccacg	ttttgatcaa	caatgcaggc	gtgatgatgc	420
gtccgtactc	gaagacagca	gatggctttg	agatgcacat	aggagtcaac	cacttgggtc	480
acttctctct	ancccatctg	ctgctagaga	aactaaagga	atcagcccaa	tcagggatag	540
taaatgtgtc	ttccctcgca	catcactgg	gaaggatcca	cttcataaac	ctgcaaggcg	600
agaaattlcta	caatgcaggc	ctggcctact	gtcacagcaa	gctagccaac	acccctcttca	660
cccaggaaact	ggcccgagga	ctaaaaggct	ctggcgttac	gacgtattct	gtacacccctg	720
gcacagtcna	atctgaactg	gttcggcaact	catctttcat	ggatggatg	tgggtggctt	780
tctccctttt	catcaagact	cctcagcagg	gagccagac	cagccctgcac	ctgtccctaa	840
cagaaggctct	tcgagattct	agtgggaate	atctcagtga	ctgtcatgtc	gcatgggtct	900
ctgcccaagc	tcgtatagag	actatagcaa	ggcggctgtg	ggagctcagt	tgtgacctgc	960
tyggertccu	aatagactaa	caggucagtgc	caattggacc	caagagaaaga	ctgcaagcga	1020
ctacacagta	cttcottgtca	aaatgactct	ccttcaaggc	tttcaaaaac	cttgcacaaa	1080
agagagcaaa	accttccagc	cttgcctgtc	tggtgtccag	ttaaaactca	gtgtactggc	1140
agattcgtct	aaatgtctgt	catgtccaga	ttacttttgc	ttctgttact	gcagaggtta	1200
ctagagatst	cataatagga	taagaagacc	ctcatatgac	ctgcacagct	cattttctct	1260
ctgaagagaaa	ctactaccta	ggagaactct	agctatagca	gggatgatct	atgcacattt	1320
gaactagctt	ctttgttcac	aatttcagttc	ctcccaacca	accagtcttc	acttcaagag	1380
ggccacactg	caacctcagc	ctaactgaa	taacaaagac	tggttcaggc	gcagggcttg	1440
cccaggcaty	gtggatcacc	ggaggtcagt	agttcaagac	cagccctggc	aacatggctg	1500
aaccccaact	ctactaaaaa	ttgtgtatat	ctttgtgtgt	cttctgttct	atgtgtgcra	1560
agggagtat	ttcaccaagt	tcaaaacagc	cacaaataac	agagatggag	caaacagtg	1620
cratccagtc	tttatgcaaa	tgaaatgctg	cuaagggag	cagattctgt	atatgttgg	1680
aaotacccac	caagagcaca	tggttagcag	ggagagagta	aaaaaagaga	aggaagaatc	1740
tggaagntaa	tgcccaaaat	gaggggacta	gttaaggatt	aactagccct	ttaaggatta	1800
actagttaag	gattaatagc	aaaagayatt	aatatgcta	acatagctat	ggaggaattg	1860
agggcaagca	cccaggactg	atgaggtctt	ancaaaaac	agtgtggcaa	aaaaaanaaa	1920
aaaaaanaaa	aaaaatccta	aaaacaaaca	aacaaanaaa	acaaatctct	atccagaaan	1980
attatcttag	ggactgatat	tggttaattat	ggccaattta	ataatatttt	gggycatttc	2040
cttaccttgt	cttgacaaag	ttaaaatgtc	tgtgccaaaa	ttttgtattt	tatttggaga	2100
cttctttatca	aaagttaatg	tgccaaaggc	agtctaagga	attagtagtg	ttcccatcac	2160
ttgtttggag	tgtgctactc	taaaagattt	tgaattctctg	gaatgacant	tatattttta	2220
cttcgggtggg	ggaaagagtt	ataggaccac	agcttctact	tctgatant	gtaaattaat	2280
cttttatlyc	acttgttttg	accatttagc	tatatgttta	gaantggcca	ttttacggaa	2340
aaattagaaa	aattctgata	atagtgcaga	ataaatgaat	taattgttta	cttaatttat	2400
attgaactgt	caatgcacaa	taaaaattcc	ttttgattat	ttcttgtttc	catttaccag	2460
aataaaaacg	taagaatcaa	aagtttgatt	acaaaaaaaa	aaaaaa		2507

<210> 333

<211> 3030

<212> DNA

<213> Homo sapien

<400> 333

gcaggcgact	tgagagctgg	gagcgattta	aaacgctttg	gattccuccg	gcctgggttg	60
ggagagcgag	ctgggtgccc	cctagattcc	ccgccccgc	acctcatgag	ccgacccctcg	120
gctccatgga	gcccggcaat	tatgccarct	tgatggagc	caaggatata	gaaggtctgc	180
tgaggagcgg	agggggggcg	aatctggctg	cccactcccc	tctgaccagc	cacccagcgg	240
cgcctacgct	gatgcctgct	gtcaactatg	cccccttggg	tctgcccagg	tcggcgaggc	300
cgcacaaagca	atgccaccca	tgccctgggg	tgccccaggg	gaggtcccca	gctcccgctg	360
cttatgggta	ctttggagac	gggtactact	cctgcccaggt	gtcccgagac	tgcctgaaac	420
cctgtgcccc	ggcagucacc	ctagccgggt	accccgcgga	gactccacag	gcgggggag	480

agtaccccaag	yrgerccact	gagtttgcct	tctatccggg	atatccggga	acctaccagc	540
ctatggccag	ttacctggag	gtgtcctgtg	tgcagactct	gggtgctcct	ggagaaatgc	600
gacatgactc	cctgttgcct	gtggacagtt	accagtcttg	ggctctcgcl	ggtggctgga	660
acagccagat	gttttgcag	ggagaaacaga	anccaccagg	tccttttctg	aagtcagcat	720
ttgcagactc	cagcggggcag	caacctcctg	acgcctgagc	ctttcgtcgc	ggcggcaaga	780
aacgcatctc	gtacagcaag	gggcagttgc	gggagctgga	gcgggaatct	gcggctaaac	840
agttcatcac	caaggacaa	aggcgcaaga	cttcggcagc	caacagcttc	tcggagcgcc	900
agattaccat	ctggtttctg	aacggcgggg	tcaaaagaga	gaaggttctc	gcraaggtga	960
agaacagcgc	taccccttaa	gagatctcct	tgcctgggtg	ggaggagcga	aagtgggggt	1020
gtcttgggga	gaccaggaa	ctgccaaagc	caggtctggg	craaggactc	tgctgagagg	1080
cccttagaga	caacacctt	cccaggccac	tggctgctgg	actgttcttc	aggagcgggc	1140
tgggtaccna	gtatgtgcag	ggagacggaa	ccccatgtga	cagccacttc	caccagggtt	1200
cccaaaagaa	ctggtccragt	ctaatcatt	catcctgaca	gtggcaatca	tcaagatcac	1260
dagtactagc	tgccatgac	gttagcctca	tattttctat	ctagagctct	gtagagact	1320
ctagaaaccc	ctttcatgaa	ttgagctaat	tatgaataaa	tttggaaagg	gatccctctg	1380
cagggaagcl	ttctctcaga	ccccttcca	ttacacctct	cacctgggtg	acagcaggaa	1440
gactgaggag	agggaacagg	gcagattcgt	tgtgtggctg	tgatgtccgt	ctagcatttt	1500
tctcagctga	cagctgggta	ggtggcaaat	tgtagagggt	gtctcttctc	ccctccttgt	1560
ccaccccata	gggtgtaccc	actggtcttg	gaagcaccca	tccttaaatc	gatgattttt	1620
ctgtcgtgtg	aaatgagag	cagcaggctg	ccctagctca	gtccttctct	ccagagaaaa	1680
agagatttga	gaagtgtcct	gggtaatcca	ccattcaatt	ctccccca	actctctgag	1740
tcttccctta	atattctcgg	tggttctgac	cuaagcaggc	catggtttgt	tgagcatttg	1800
ggatccacgt	gaagttagat	ttctgagct	tgcatactta	gccttccca	ggcuaaaacg	1860
gagtggcaga	gtggtgcaca	ccctgttttc	cuagtcacag	tagacagatt	cacagtgcgg	1920
aattctggaa	gctggagaca	gaagggtctc	ttgagagac	gggactctga	gagggaacatg	1980
agggcctctg	cctctgtgtt	caftctctga	tgtcctglac	ctgggtcag	tgccnggttg	2040
gactcatctc	ctggcgcgcg	agcaazagcca	gcgggttctc	gctggctctt	ctgtccactt	2100
aggtctgggg	tgggggggct	gccggcgcac	tctccacgat	tgagtgacac	ggcctgaagt	2160
ctggacaaac	cgcagaaacg	agctcngag	cagcgggtcg	gtgtcgagta	gtgtgggtcgg	2220
tggcragcag	ttggtgggtg	gcccggcccg	ccactacctc	gaggacattt	ccctcccgga	2280
gcccagctct	ctagaaaccc	cggggcggcc	gccgcagcca	agtgtttatg	gcccgcggctc	2340
gggtgggagc	ctagccctgt	ctcctctctc	gggaaggagt	gagggtggga	cgtgacttag	2400
acacctacaa	atctatttac	caaagaggag	cccgggactg	ggggaaaaag	ccaaagagtg	2460
tgaactgcag	cggactgggg	gttcaggggga	agaaggacag	gaaggaggaag	atgaggtcga	2520
ttccttgatt	taaaanaatc	tccaagccuc	gtggtccagc	tttaaggctct	cgggttacatg	2580
cgcgcctcag	agcaggtuac	ttctgtcctt	ccacgtcctc	cttcaaggga	gccccatgtg	2640
ggtagctttc	aatatcgag	gtcttlaact	ctctgctctc	ataagctcaa	acccaccac	2700
gactgggcaa	gtaaaacccc	tccctcgcgg	acttcgggac	tggtgagagt	tcagcgcagc	2760
tgggctctgt	gggagggggc	aagatagatg	agggggagcg	gcattggtgcg	gggtgacccc	2820
ttggagagag	gaaagaggcc	acaagagggg	ctgcacccgc	cactaacgga	gatggccttg	2880
gtagagacct	ttgggggtct	ggaaacctct	gactcccat	gtcttaactc	ccacactctg	2940
ctatcagaaa	cttaaacctt	aggattttct	ctgtttttca	ctcgcaataa	aytcagagca	3000
ancaaaaana	aaaaaanaaa	aaatctcgag				3030

<210> 334

<211> 2417

<212> DNA

<213> Homo sapien

<400> 334

ggcggcgcct	ctagagctag	tgggatcccc	cgggctgcac	gaattcggca	cgaatgagtt	60
ggagttttac	ctgtattgtt	tttaatttcaa	caagcctyag	gactagccac	aaatgtaccc	120
agtttataaa	tggggaacaa	ggtgcataaa	ggttgttacc	tgtcaaaagt	cgtatgttgc	180
agagccaaag	tttgagccca	gttatgtctg	atgaacttag	cctatgtctc	ttaaaacttc	240
gaatgctgac	cattgaggat	atctaaactt	agatcaattg	catttccccc	ccaaagactat	300

ttactttatca	atncaataaf	accaccttca	ccaatctatt	gttttgatac	gagactcana	360
tatgccagat	atatgcaaaa	gcaacctora	agrtctctaa	tcatgctcac	ctaaagatt	420
cccgggatct	autaggtcca	aagaaacttc	ttctagaaat	ataaagaga	aataggatt	480
atgcaaaaat	tattatctaa	tttttttcat	ccatctctta	attcagcaaa	catttatctg	540
ttgttgactt	tatgcagtar	ggccttttaa	ggattggggg	acaggtgaag	aacgggggtc	600
cagaatgrat	cct.cctacta	atgaggtcag	tacacattty	catt.tt.aaaa	tggccctgtr	660
agctggggcat	ggtggatrat	gcctgtaatc	tcaacattgg	aaaggccaagg	caggaggatt	720
gcttcagccc	aggagttcaa	gaccagcrtg	ggcaacatag	aaagacccca	tctctcaatc	780
aatcaatcaa	tgcctgtctt	ttgaaaataa	aactctttaa	gaaggtttta	atgggcaggg	840
tytggttagct	catgctctata	atcacgncat	ttgggaggct	gaggcaggag	gatcacttta	900
gcccaggaagt	tcaagaccag	cctgggcacac	aagtgaacac	tcatctcaat	tttttaataa	960
aatgaataca	tacataagga	aagataaaaa	gaagaagtta	atgaagaaat	acngtataaa	1020
acaaatctct	tggacctaaa	agtat.ttttg	ttcaagccaa	atatgtgtaa	tcaactctct	1080
gtgttgaggga	tacagaatat	ctaagcccag	gaactgagc	agaaagtcca	tgtactaact	1140
aatcaaaccc	aggcaaggca	aaaatgagac	taactaatca	atccgaggca	aggggcnaat	1200
tacagcggaa	ctgactcttg	tctattaagc	gacaactttc	cctctgttgt	atttttcttt	1260
tatt.caatgt	aaaaggatba	aaactctota	aaactaaaaa	caatgtttgt	caggagttac	1320
aaaccatgac	canutaatta	tggggaatca	taaaat.atga	ccglatgaga	tuttgatggt	1380
ttacaahgtg	taccacatgt	taat.caattc	aaacattaa	gaacttaaaa	atgaatttac	1440
ggagatttga	atgtttcttt	cctgttgtat	tgtttggttc	aggctgccat	aaacaaatac	1500
cacagactgg	gaggcttaag	taacagaaat	tcattttctca	cagttctagg	ggctgggaagt	1560
cuacgatcaa	ggtgcaggaa	agycaggctt	cattctgagg	ccccctctct	ggctcacatg	1620
tggccaccc	ccractgcyt	gctcacatga	cctcttttgt	ctcctggaaa	gagggtgttg	1680
gggacagagg	gaagagagaag	gagagggaac	tctctggtgt	ctngtcttct	aaaggacccta	1740
acctggggcca	ctttgggccc	ggcactgttg	gggtgggggt	tgtggctgct	ctgctctgag	1800
tggccaagat	aaagcaacag	aaaatgtcc	aaagcgtgc	agcaaaagaca	agccaccgaa	1860
cagggtctct	ctratcagtg	tggggacctc	caagtuggcc	acccctggag	caagccccca	1920
cagagcccat	gcaaggtggc	agcagcagaa	gaagggaatt	gtccctgtcc	ttggcaratt	1980
cctcaccgac	ctggtgatgc	tggacactgc	gatgaatggt	aatgtggatg	agaatatgat	2040
ggactccrag	aaaaggagac	ccagctgttc	aggtgggtgc	aat.cattac	agccttcac	2100
ctggggagga	actggggggc	tggttctggg	tcagagagca	gcccagtgag	ggtgagagct	2160
acagcctgic	ctgcacagct	gatccrcaat	cccggtcaac	cagtaatcaa	ggctgagcag	2220
atcaggcttc	cgggagctgg	tcttgggaag	ccagdcctgg	ggtgagttgg	ctcctgctgt	2280
ggtactgaga	caatatgtc	ataaatttcaa	tgcgcctctg	tatccctttt	ttttttttat	2340
ctgtctacat	ctat.aatcac	tatgcatact	agctcttgtt	agtgttctta	ttcmaactta	2400
ttagagatatg	ttatact					2417

<210> 335

<211> 2984

<212> DNA

<213> Homo sapien

<400> 335

atccctctct	ccccactctc	ctttocagaa	ggcacttggy	gtcttatctg	ttggactctg	60
aaaacacttc	agggcgcctt	craaggcttc	cccgaarccc	taagcagccg	cagaagcget	120
cccagactgc	cttctcccac	actcaggtga	tggagltgga	gaaggaagttc	agccatcaga	180
agtaacctgic	ggccootgaa	cgggcccacc	tggccaagaa	cctcaagctc	acgyagaccc	240
aagtgaayta	atgggttccag	aacagaacgt	ataagactaa	gcgaaagcag	ctctcctcgg	300
agctgggaga	cttggagaa	cactcctctt	tgcnggcctt	gaagagaggag	gurtttctcc	360
gggcctccct	ggtctctcgtg	tataacagct	atccttacta	cccat.acctg	tactgcgtgg	420
gcagctggag	cccagctttt	tggtaatgcc	agctcaggtg	acaaaccatba	tgatcaaaaa	480
ctgctttccc	cagggtgtct	ctatgaaaaa	cacaaggggc	caaggtcagg	gagcaagagg	540
tgtgcacacc	aaagctattg	gagtttttgcg	tggaaatctc	aat.t.cttca	ctggtgagac	600
aatgaaacca	cagagacagt	gaaggtttta	atacctaagt	cattccccc	gtgcatactg	660
taggctcattt	tttttgcctc	tggctacctg	tttgaagggg	agagagggaa	aatcaagtg	720

tatcttccag	cactttghat	gatttttggat	gagctgtaca	ccaaggall	ctgttctgca	780
actccatct	cctgtgtcac	tgaatatcaa	ctctgaaaga	gcaaacctaa	caaggagaaag	840
gacaaccag	atgaggatgt	caaccaactga	attaaactta	agtcacagaag	cctcctgctg	900
gccttggaa	atggccaagg	ctctctctgt	ccctgtaaaa	gagaggggca	aataagagagt	960
ctccaagaga	acgccctcat	gctcagcaca	tatttgcctg	ggagggggag	atgggtggga	1020
ggagatgaaa	atatcagctt	ttcttattcc	tttttatter	ttttaaaatg	glatgrcaac	1080
ctaatatttt	acagggtggc	ccaactagaa	caagatgcac	tcgttgtgat	tttaagacaa	1140
gctgtataaa	cagaactcca	ctgcaaggag	gggggcccgg	ccaggagaaat	ctccgcttgt	1200
ccaagacagg	ggcctaagga	gggtctccac	actgctgcta	ggggctgttg	cattttttta	1260
ctagcagaaa	gtggaaaggc	ctcttctcaa	cttttttccc	ttgggttgga	gaatttagaa	1320
tcagaaagtt	cctggagttt	tcaggctatc	atatatactg	tatcctgaaa	ggcaacataa	1380
ttcttccctc	cctcccttta	aaattttgtg	ttcctttttg	cagcaattar	tcactaaagg	1440
gottcatttt	agtcacagat	tttagctctg	ctgcaacctaa	cttatgcctc	gcttatttag	1500
cccagagatc	ggcttttttt	tttttttttt	tttttccgtc	tuccraaagc	tttatctgct	1560
ttgacttttt	aaataaagtt	gggggagagat	tctgaatttg	ctaataagaca	tgcattttta	1620
aaactagcna	ctcttatttc	tttcttttaa	aaatacatag	cattaaatcc	uaaatccat	1680
ctaaagacct	gacagcttga	gaaggctact	actgcattta	taggaacctc	tggttggtct	1740
gctgttacgt	ttgaagctct	acaatccttg	agaacttttg	catgcagagg	aggttaagagg	1800
tatttggatt	tcacagagga	agaacacagr	gcagaaatgaa	gggccagggc	tactyagctg	1860
tcacagtgag	ggctcatggg	tgggacatgg	aaaagaaggc	agcctaggcc	ctggggagcc	1920
cagtcacttg	agcagacagg	ggactgagtg	agccttttgc	aggaataaggc	taagaaanaag	1980
gaaaacattt	ctaaacacaa	acaagaaact	gtccaaatgc	tttgggaact	gtgtttattg	2040
cctataatgg	gtccccaaaa	tgggtaacct	agacttcaga	gagaactgagc	agagagcaaa	2100
ggagaaatct	ggctgtcctt	ccattttcat	ctgtttatct	caggtgagct	ggtagagggg	2160
agacattaga	aaaataatgan	acaaacaaan	aacttactaat	gaggtacgct	gaggcctggg	2220
agtcctctga	ctccactact	taattccgct	tagtgagaaa	cctttcaatt	ttttttatt	2280
agaaggggcca	gcttactgct	ggtggcaaaa	ttggcaacat	nagtcactag	aaagtbggct	2340
aatttccccc	cattttctgt	ggttcgggct	ccacattgca	atgttcaatg	ccagctgctg	2400
ctgaccccca	ccggagtgct	agccagrace	aaaggccagg	tagcctgaat	cgctttctgc	2460
tccttaccct	tccttttaaa	taagcattta	gtgctragtc	cctactgagt	actctttctc	2520
tcctctctc	tgaatttaac	tccttcaact	tgcactttgc	aaggattaca	catttcactg	2580
tgatgtatct	tgtgttgcaa	aaaaaanaaa	aagtgtcttt	gttttaaaat	actctggttg	2640
tgaatccatc	ttgttttttc	ccatttgtaa	ctagtcatta	accratctct	gaactggtag	2700
aaaaacatct	gaagagctag	tctatcagca	ctgacagggt	gaattggatg	gttctcagaa	2760
ccatttcaac	cagacagcct	gtttctatct	tgcttaataa	attagtttgg	gttctctaca	2820
tgcataacaa	accttgctcc	aattctgtcac	ataaaagtct	gtgacttgaa	gttttagtcag	2880
cacccccac	aaactttatt	tttctatgtg	ttttttgcaa	catatgagtg	ttttgaaat	2940
aaagtaccca	tgtctttatt	ayaaaaaana	aaaaaanaaa	aaaa		2984

<210> 336

<211> 147

<212> PRT

<213> Homo sapien

<400> 336

Pro	Ser	Phe	Pro	Thr	Leu	Leu	Ser	Arg	Arg	His	Leu	Gly	Ser	Tyr	Leu
1			5					10						15	
Leu	Asp	Ser	Glu	Asn	Thr	Ser	Gly	Ala	Leu	Pro	Arg	Leu	Pro	Gln	Thr
			20					25					30		
Pro	Lys	Gln	Pro	Gln	Lys	Arg	Ser	Arg	Ala	Ala	Phe	Ser	His	Thr	Gln
			35					40					45		
Val	Ile	Glu	Leu	Glu	Arg	Lys	Phe	Ser	His	Gln	Lys	Tyr	Leu	Ser	Ala
			50					55					60		
Pro	Glu	Arg	Ala	His	Leu	Ala	Lys	Asn	Leu	Lys	Leu	Thr	Glu	Thr	Gln
65					70					75					80

Val Lys Ile Trp Phe Gln Asn Arg Arg Tyr Lys Thr Lys Arg Lys Gln
 85 90 95
 Leu Ser Ser Glu Leu Gly Asp Leu Glu Lys His Ser Ser Leu Pro Ala
 100 105 110
 Leu Lys Glu Glu Ala Phe Ser Arg Ala Ser Leu Val Ser Val Tyr Asn
 115 120 125
 Ser Tyr Pro Tyr Tyr Pro Tyr Leu Tyr Cys Val Gly Ser Trp Ser Pro
 130 135 140
 Ala Phe Trp
 145

<210> 337
 <211> 9
 <212> PRT
 <213> Homo sapien

<400> 337
 Ala Leu Thr Gly Phe Thr Phe Ser Ala
 1 5

<210> 338
 <211> 9
 <212> PRT
 <213> Homo sapien

<400> 338
 Leu Leu Ala Asn Asp Leu Met Leu Ile
 1 5

<210> 339
 <211> 318
 <212> PRT
 <213> Homo sapien

<400> 339
 Met Val Glu Leu Met Phe Pro Leu Leu Leu Leu Leu Leu Pro Phe Leu
 1 5 10 15
 Leu Tyr Met Ala Ala Pro Gln Ile Arg Lys Met Leu Ser Ser Gly Val
 20 25 30
 Cys Thr Ser Thr Val Gln Leu Pro Gly Lys Val Val Val Val Thr Gly
 35 40 45
 Ala Asn Thr Gly Ile Gly Lys Glu Thr Ala Lys Glu Leu Ala Gln Arg
 50 55 60
 Gly Ala Arg Val Tyr Leu Ala Cys Arg Asp Val Glu Lys Gly Glu Leu
 65 70 75 80
 Val Ala Lys Glu Ile Gln Thr Thr Thr Gly Asn Gln Gln Val Leu Val
 85 90 95
 Arg Lys Leu Asp Leu Ser Asp Thr Lys Ser Ile Arg Ala Phe Ala Lys
 100 105 110
 Gly Phe Leu Ala Glu Glu Lys His Leu His Val Leu Ile Asn Asn Ala
 115 120 125
 Gly Val Met Met Lys Pro Tyr Ser Lys Thr Ala Asp Gly Phe Glu Met
 130 135 140
 His Ile Gly Val Asn His Leu Gly His Phe Leu Leu Thr His Leu Leu

145 150 155 160
 Leu Glu Lys Leu Lys Glu Ser Ala Pro Ser Arg Ile Val Asn Val Ser
 165 170 175
 Ser Leu Ala His His Leu Gly Arg Ile His Phe His Asn Leu Gln Gly
 180 185 190
 Glu Lys Phe Tyr Asn Ala Gly Leu Ala Tyr Cys His Ser Lys Leu Ala
 195 200 205
 Asn Ile Leu Phe Thr Gln Glu Leu Ala Arg Arg Leu Lys Gly Ser Gly
 210 215 220
 Val Thr Thr Tyr Ser Val His Pro Gly Thr Val Gln Ser Glu Leu Val
 225 230 235 240
 Arg His Ser Ser Phe Met Arg Trp Met Trp Trp Leu Phe Ser Phe Phe
 245 250 255
 Ile Lys Thr Pro Gln Gln Gly Ala Gln Thr Ser Leu His Cys Ala Leu
 260 265 270
 Thr Glu Gly Leu Glu Ile Leu Ser Gly Asn His Phe Ser Asp Cys His
 275 280 285
 Val Ala Trp Val Ser Ala Gln Ala Arg Asn Glu Thr Ile Ala Arg Arg
 290 295 300
 Leu Trp Asp Val Ser Cys Asp Leu Leu Gly Leu Pro Ile Asp
 305 310 315

<210> 340

<211> 483

<212> DNA

<213> Homo sapien

<400> 340

gccgagggtct gcccttcacac ggaggacacg agactgcttc ctcaagggct cctgcttgc 60
 tggacactgg tgggaggcgc tgtttagttg gctgttttca gagggtctt tgggaggac 120
 cctctgtgc aggtctggagt gtctttattc ctggcgggag accgcacatt ccactgtga 180
 ggttgtgggg ggggtttatc aggragtgat aaacataaga tgtcalttcc ttgactcgg 240
 ccttcaattt tctctttggc tgaaggacga gtctgtgtg tccgatgta actgacccct 300
 gctccaaacg tgacatcact gatgctcttc tgggggggag tgatggcccg ctgggtcacg 360
 tgotcaatct cgcattcga ctctgtctcc aaactgtatg aagacacctg actgcacgtt 420
 tttctgggc ttccagcatt taaagtgaac ggcagcactc ctacgtccg actcrgatgc 480
 ctg 483

<210> 341

<211> 344

<212> DNA

<213> Homo sapien

<400> 341

ctgctgtga gtccacagatt tcattataaa tagcttccrt aaggaaata cactgaatgc 60
 tatcttact aaccattcta tttttataga aatagctgag agtttctaaa ccaactctct 120
 gctgcttac aagtattaaa tattttactt ctttccataa agagtgcctc aaaatatgra 180
 attaatitaa taattttctga tgatggtttt atctgcagta atatgtatat catctattag 240
 aatttactta atgaanaact gaagagaaca aaatttgtaa cccactagcac ttaagtactc 300
 ctgattctta acattgtctt taatgaccac aagacaacca acag 344

<210> 342

<211> 592

<212> DNA

<213> Homo sapien

<400> 342

acagcaaaaa	agaaactgag	aagcccaaty	tgctttcttg	ttaacatcca	cttatccaac	60
caatgtggaa	acttcttata	cttgggttcca	ttatgaagtt	ggacaattgc	tgctatccca	120
cctggcagggt	aaaccaatgc	caagagagtg	atgggaacca	ttggcaagac	tttgttgatg	180
accaggatcg	gaattttata	aaaalattgt	tgatggggaag	ttgctaagg	gtgaattact	240
tccctcagaa	gagtgcaagg	aaaagtcaga	gattgctataa	tggcagctat	tttaattggc	300
aagtgccact	gtgggaagag	ttcclgtgtg	tgctgaagtt	ctgaaggggca	gtcaaatcca	360
tcagcatggg	ctgtttggcg	caaatgcasa	agcacagggtc	tttttagcat	gctgggtctct	420
cccgtgtcct	tatgcaanta	atcgtcttct	tctaaatttc	tcttaggctt	cattttccaa	480
agttcttctt	ggtttgat	gtctttctcg	cttccratca	attctataaa	atagtatggc	540
ttcagccacc	cacttttcgc	cttaguttga	cgtgagttct	cggctgcgcg	tg	592

<210> 343

<211> 382

<212> DNA

<213> Homo sapien

<400> 343

ttcttgacct	cctcttctt	caagctcaaa	caccacctcc	cttattccagg	accggcactt	60
cttaattgtt	gtggccttct	ctccagcttc	tcttagggag	ggtaattggtg	gagttggcat	120
cttgraactc	tcttttctcc	ttctctccc	ttctctgccc	cgccttccc	atcctgctgt	180
agacttcttg	attgtcagtc	tytgtcacat	ccagtgatcg	ttttggttcc	tgttcccttt	240
ctgactgccc	aaggggctca	gaaccccagc	aatccccccc	tctcaatccc	ttcttttttg	300
ggggtagttg	gaagggaactg	aaattgtggg	gggaaggcag	gaggcacatc	antaaagagg	360
aaaccaccac	gctgaaaaaa	aa				382

<210> 344

<211> 536

<212> DNA

<213> Homo sapien

<400> 344

ctgggcccga	agctgtaggg	tcaatcagag	gcaggcttct	gagtgatgag	agtcctgaga	60
caataggcca	catcaacttg	gctggatgga	acctcacaat	aaggtggcca	cctcttgttt	120
gtttaggggg	atgccaaagg	taaggccagc	tcagttatat	gaagagaaag	agaaacaaaca	180
agtccttcag	agaaatggat	gcacccagag	tgggatcccg	gtcacatcan	ggtcacactc	240
caccttcatg	tgcctggaag	gttgcraggt	cagaaaaatc	caccccttac	gagtgccggt	300
tcgacertac	atcccccgc	cgcgtccctt	tctccataaa	attcttctta	gtagctatta	360
ccttcttatt	atttgatcta	gaaattgccc	tccctttacc	cctaccatga	gacctacaaa	420
caactaacct	gccactaata	gttatgtrac	cctcttattt	aatcatcctc	ctagccctaa	480
gtctggccca	tgagtgacta	caaaaaggat	tagactgagc	cgaataacaa	aaaaaa	536

<210> 345

<211> 251

<212> DNA

<213> Homo sapien

<400> 345

accttttgag	gtctctctca	ccacttccac	agccaccgtc	accgtgggat	gtgctggatg	60
tgaatgaagc	ccccatcttt	gtgcttcttg	aaaagagagt	ggaggtgtcc	gaggactttg	120
gcgtggggcc	ggaaatccca	tcttactctg	cccaggagcc	agacacattt	atgggaacaga	180
aaataacata	tcggatttgg	agagacactg	ccaactggct	ggagattaat	cgggacactg	240
gtgcccatttc	c					251

<210> 346
 <211> 282
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> {1}...{282}
 <223> n = A,T,C or G

<400> 346
 cgctgtcttg acactgtgat catgacaggg gtccaaacag aaagtgcctg ggccctcctt 60
 ctaagtcttg ttaccaaaa aaggaaaaag aaaaagatctt ctcagttaca atttctggga 120
 agggagacta taactggctc ttgccttaag tgagaggtct tccctccgc accaaaaat 180
 agaaaggctt tctatttcac tggccagggt agggggaagg agagtaactt tgagctcttg 240
 ggtctcattt cccaaggctg cttcaatgct catnaaaacc aa 282

<210> 347
 <211> 201
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> {1}...{201}
 <223> n = A,T,C or G

<400> 347
 acacacataa tattataaaa tgcctatctaa ttggaaggag cttctctatca ttgcaagtca 60
 taatatatac tcttaaaaaa ttactancaa cttttaccta agctcctaaa tgccttataa 120
 tctgagactg actggaccac cccagaccca gggcaagat acatgttacc atatcatctt 180
 tataaagaat tttttttctg c 201

<210> 348
 <211> 251
 <212> DNA
 <213> Homo sapien

<400> 348
 ctgttaatca caacatctgt gcacacattg tggcaagtga gaaaatgttc taanaatcaca 60
 agagagacaa gtgccagaat gaaactgacc ctaagtccca ggtgcccctg ggcaggcaga 120
 aggagacact cccagcatgg aggaggggtt atcttttcat cctagggtcag gtctatcaatg 180
 ggggaggggt ttattataga actcccaaca gccacctca ctctgcccac ccacccgatg 240
 gccctgctc c 251

<210> 349
 <211> 251
 <212> DNA
 <213> Homo sapien

<400> 349
 taanaatcaa gccatttaac tgtatctctg aaggtaaaac atatatggga gctggetcac 60
 aacccctggg gatgccagag ctatgggtcc agaacatggg gtgggtattat caacagagtt 120
 cagaagggtc tgaactctac gtgttaccag agaactaat gcaattcatg cattccactt 180
 agcaattttg taanaatcaa gaaacagacc ccaagagttc ttcaagatga ggaanaatca 240

actccttggtt t

251

<210> 350

<211> 908

<212> DNA

<213> Homo sapien

<400> 350

ctggacactt	tgcgagggct	tttgcctggct	gctgctgctg	cccgctcatgc	tactcatcgt	60
agcccgcccg	gtgaagctcg	ctgcttcccc	tacctcctta	agtgactgcc	aaacgcccac	120
cggctggagc	tgctccggtt	atgatgacag	agaaaatgat	ctcttccctt	gtgacaccaa	180
cacctgtaaa	tttgatgggg	aatgttttaag	aattggagac	actgtgactt	gcgtctgtca	240
gttcaagtgc	aacaatgact	atgtgcctgt	gtgtggtctc	aatggggaga	gttaccagaa	300
tgagtgttac	ctgcgacagg	ctgcctgcaa	acagcagagt	gaggtacttg	tggtgtcaga	360
aggatcatgt	gccacagtc	atgaaggctc	tggagaaact	agtcaaaagg	agacatccac	420
ctgtgatatt	tccagttctg	gtgcagaaatg	tgacgaagat	gccgaggatg	tctgggtgtg	480
gtgtaatatt	gactgtttct	aaaccaactt	caatcccttc	tgcgcttctg	atgggaaatc	540
ttatgataat	gcattgcaaa	tcaaaagaagc	atcgtgtcag	aaacaggaga	aaattgaagt	600
catgtctctg	ggtcgatgtc	aagataaacac	aactacnacc	actaagttctg	atgatgggca	660
ttatgcanga	ccgattatcg	cagagaatgc	taccaaattc	gaagaaagtg	ccagagaaca	720
ccacatacct	tgtccggaac	attacaatgg	cttctgcattg	catgggaagt	gtgagcattc	780
tatcaatatg	caggagccat	cttgcagggtg	tgatgtctgt	tatactggac	aacctgtga	840
aaaaaaggac	tacagtgttc	tatacgttgt	tccnggtctt	gtacgakttc	agtatgtctt	900
aatgcag						908

<210> 351

<211> 472

<212> DNA

<213> Homo sapien

<400> 351

ccagttattt	gcagtggtta	agagccctatt	taccataaat	aatactaaga	accaaactca	60
gtcaaacctt	aatgccattg	ctattgtgaa	ttaggattaa	gtagtaattt	tcaaaattca	120
catlaacttg	attttaaaa	cagwtctgyg	agtcatttac	cacaagctaa	atgtgtacac	180
tatgataaak	acaaccattg	tattccctgtt	tctctaaaca	gtcctaattt	ctaaactgtt	240
atatatcttt	cgacatcaat	gaactttgtt	tctttttact	ccagtaataa	agtaggcaca	300
gactcttcca	caacaacttc	gcccctctcat	gcccctgcctc	tcaccatgtt	ctgctccagg	360
tcagccccct	tttggcctgt	ttgttttctc	aaaaaacctaa	tctgcttctt	gcttttcttg	420
gtcaatatata	tttggggaag	atgtctgctt	gcccacacac	gaagcaagtc	aa	472

<210> 352

<211> 251

<212> DNA

<213> Homo sapien

<400> 352

ctcaaagcta	atcctctggg	aatcaaacca	gaaaagggca	aggatcttag	gcattgtgga	60
tgtggataag	gccaggtcaa	tggctgcaag	catgcagaga	aagaggtaaa	tcggagcgtg	120
caggctgcgt	tccgtcctta	cgatgaagac	cacgatgcag	tttccaaaca	ttgcccactac	180
atacatggaa	aggaggggga	agccaaacca	gaattgggct	ttctctaatt	ctgggataacc	240
aataagcaca	a					251

<210> 353

<211> 436

<212> DNA

<213> Homo sapien

<400> 353

tttttttttt	tttttttttt	tttttttttt	caatgcagtc	atttatttat	tgagtatgtg	60
cacatttatg	tatttttact	ataotgatta	tatttatcat	gtgacttcta	atttataaat	120
gtatucaaaa	gcataaacagc	agatatataa	aatttaagag	acagaaagata	garatttaaca	180
gataaaggcaa	tttatucatt	gacattccaa	atccaatata	tttaaacatt	tgaggaaatga	240
gggggacaaa	tggaagccar	atcaattttg	tgttaaaacta	ttcagtatgt	ttcccttgc	300
tcattgtctga	raaggctctc	ccttcaatgg	ggatgacaaa	ctccaaatgc	cacacaaatg	360
tttaacagaat	actagatcca	cactggaaacg	gggttaaaaga	agaaattatt	ttctataaaa	420
gggctcctaa	tgtagt					436

<210> 354

<211> 854

<212> DNA

<213> Homo sapien

<400> 354

ccttttctag	ttcaccagtt	ttctgcagg	atgctggtta	gggagtgtct	gcaggaggag	60
caagtctgaa	accaaatcta	ggaaacatag	gaacagagcc	aggacagggy	ctgggtgggc	120
atcagggaac	accctttggg	tcgatatttt	gcttaattctg	cattctttga	gttaagatcat	180
ctggcugtag	aagctgttct	ccaggtacat	ttctctagct	cagttacaaa	aacatcttga	240
aggactttgt	caggtgcctt	gctaaaaagc	agatgcgttc	ggcacttcc	tggtctgagg	300
tttaattgac	acctacaggc	actgggctca	tgctttcang	talcttctgc	tcactttagg	360
gtgagtgaaa	gatccccact	ataggagcnc	ttgggngaga	tcataataaa	gctgacttct	420
gagtacatgc	agtaatgggg	tagatgtgtg	tggtgtgtct	tcattctctg	aaagggtgct	480
gttagggagt	gttcccgagg	ggaaacaagt	tgaaaccaat	cattgaataa	aagggtggtg	540
tgaaactggaa	aactaattca	aaagagagat	cgtgatata	gtgtggttga	tacacottgg	600
caataatggaa	ggctctaatt	tgcccatatt	tgaaataata	attcagcttt	ttgtaataca	660
aaataacaaa	gyattgagaa	tcattgtgtc	taattgtata	aagatccagg	aaacataaat	720
atataaactg	cataaatgta	aaatgcattg	gacccaagaa	ggccccaag	tgacagacaa	780
caattgtacc	attttccctt	ccaaatgtg	agcggcgagg	ctgctgttll	caagggtctc	840
acacgggagt	tcag					854

<210> 355

<211> 676

<212> DNA

<213> Homo sapien

<400> 355

gaaatttaagt	atgagctaaa	ttccctgtta	aaacctctag	gggtgacaga	ttctttcaac	60
cagggtcaag	ctgatctttc	tggaatgtca	ccaaccnagg	gcctatattt	atcnaaagcc	120
atccucaagt	cataacttga	tgtcagcgaa	gggggcacgg	aggcagcagc	agccactggg	180
garagcatcg	ctgtaaaaag	cctaccatg	agagctcagt	tcaaggcgaa	ccacccttct	240
ctgttcttta	taaggacac	tcataaccaac	acgatcttat	tctgtgacaa	gcttgccctt	300
ccctaattcag	atgggggttg	gttaaggctca	gagtgcgaga	tgagggtgag	agacaattct	360
gtgactttcc	cacggccaaa	aagctgttca	cauctcaagc	acctctgtgc	ctcagcttgc	420
tcattctgaa	aattgggtcta	ggatttcttc	caaccatttc	atgagctgtg	aaagctaaggc	480
tttgttaatc	atggaaadaag	gtagacttat	gcagaaagcc	tttctggctt	tccttatctgt	540
gggtgtctcat	ctgagtgtg	tcagtgaca	tgatcaagtc	aatgagttaa	atttcaaggg	600
attagatttt	ctgacttgc	atgtatctgc	gagatcttga	ataagtgaac	tgacatctct	660
gcttaagaaa	aaccag					676

<210> 356

<211> 574

<212> DNA

<213> Homo sapien

<400> 356

tttttttttt	tttttcagga	aaacattctc	ttactttatt	tgcatttcag	caaaggttct	60
catgtggcac	ctgactggca	tcaaaacaaa	gttcgttagg	caacaaagat	ggggccactca	120
caagettccc	atttcttagat	ctcagtgcct	atgagtatct	gacacctgtt	ctctctttca	180
gtctcttagg	gaggctttaa	ctctgttcag	gtgtgctaag	agtgcacgcc	caaggkgttc	240
aaaagtccac	aaaactgcag	tctttgctgg	gatagttaag	caagcagtgc	ctggacagca	300
gagttctttt	cttgggcaac	agataaccag	acaggactct	aatcgtgctc	ttattcaaca	360
ttctctctgc	tctgcctaga	ctggaataaa	aagccaatct	ctctcgtggc	acagggaagg	420
agatacaagc	tcgtttacat	gtgatagatc	taacaaaggc	atctaccgaa	gtctggtctg	480
gatagacggc	acaggggagct	cttaggtcag	cgctgctggg	tggaggacat	tcctgagtc	540
agctttgcag	cctttgtgca	acagtacttt	cccc			574

<210> 357

<211> 393

<212> DNA

<213> Homo sapien

<400> 357

tttttttttt	tttttttttt	tttttttttt	tacagaatat	aratgcttta	tcactgkact	60
taatatggkg	kcttgttcac	tatactttaa	aatgcaccac	tcataaatat	ttaatccagc	120
aagccacnac	caaracttga	ttttatcaac	aaaaacccct	aantataaac	ggaaaaaaag	180
atagatataa	ttattccaqt	ctttttaaam	cttaaaaarat	altccattgc	rgaatttaara	240
araaratang	tgttatatgg	akagaagggc	attcaagcac	actaaaraaa	cctgaggkaa	300
gcataatctg	tarnaaatta	aactgtcctt	tttggcattt	taacaaattt	gcaacgktct	360
tttttttctt	cttctgtttt	tttttttttt	tac			393

<210> 358

<211> 630

<212> DNA

<213> Homo sapien

<400> 358

acagggttaa	caggaggatc	cttgcctctca	cggagcttac	attctagcag	gaggacaata	60
ttaatgttta	taggaaaatg	atgagtttat	gacaazggaa	gtagatagtg	ttttacaaga	120
gcataagata	gggaagctaa	tccagracag	ggaggtcaca	gagacatccc	taagggaagtg	180
gagttttaaa	tgagagaaag	agtgctttaa	actgaaggat	gtgttgaaga	agaagggaga	240
gtagaacaat	ttgggcagag	ggaaccttat	agaccctaag	gtgggaagggt	tcaaaagaact	300
gaaagagagc	tagaacagct	ggagcrrgtt	tccggtgtaa	agaggaggtca	agagagataag	360
attaaagatg	tgaagattaa	gatcttgggt	gcattcaggg	attggcactt	ctacaagaaa	420
tcactgaagg	gagtaatgtg	acattacttt	tcacttcagg	atggccattc	taactccagg	480
gggtagactg	gactaggtaa	gactggaggc	aggtagacct	cttctaaggc	ctgcgatagt	540
gaaagacaaa	aatagtgagg	gaaattcagg	ggatagtgaa	aatcagtagg	acttaatgag	600
caagccagag	gttctctcac	aaacaaccagt				630

<210> 359

<211> 620

<212> DNA

<213> Homo sapien

<400> 359

acagcattcc	aaaatataca	tctagagact	aaarrgtaaa	gctctatagt	gaagaagtaa	60
taattcaaaa	atgtacttaa	tatagaaaat	ttataatcag	aaaaataaat	attcagggag	120

ctccacagaa gaataaagtg ctctgccagt cattaaagga ttactgctgg tgaattaaat	180
atggcattcc ccaagggaag tagagagatt ctctcggatt atgttcaata ttattttac	240
aggattcaact gtcttaggaa cagatataaa gcttcgccac ggaagagatg gacaaagcac	300
aaagacaaca tgatacotta ggaagcaaca ctacccttcc aggcataaaa ttctggagaaa	360
tgcaacatta tgcctcatga ataattatga gaaagaaggc ctgatgaaa tgacatcctt	420
aattgtaagat aactttataa gaattctggg tcaaataaaa ttctttgaag aaaaacatca	480
aattgtcattg aatttatcaa tacttatctg gcataataac tatgaaggca aaactaaaaa	540
aacaaaagc tcacacaaaa caaaaccatc aacttatttt gtattctata acatacagaa	600
ctgttaagat gtgacagctg	620

<210> 360

<211> 431

<212> DNA

<213> Homo sapien

<400> 360

aaaaaagaaa agccagauca acatgtgata gataatatga ttggctgcac acttccagac	60
tgatgaatga tgaacgtgat ggactattgt atggagcaca tcttcagcaa gagggggaaa	120
tactcatcat ttttggccag cagttgtttg atcaccuac atcatgccag aatartcagc	180
aaactttctt agctcttgag aagtcaaat ccgggggaat ttatccttgg caattttaat	240
tggactcctt atgtgagagc agcggctacc cagctggggg ggtggagcga acccgtaact	300
agtggacatg cagtggcaga gctccttgta accacctaga ggaatacaca ggcaatgtg	360
tgatgccaag cgtgacacct gtgacactca aatttgtctt gttcttctct ttcggcgtgt	420
agattcttag t	431

<210> 361

<211> 351

<212> DNA

<213> Homo sapien

<400> 361

acactgattt ccgataaaaa gaateatcat ctltaccttg acttttcagg gaattactga	60
actttcttct cagaagatag ggcacagcca ttgctcttgg ctcaattgaa gggctctgcat	120
ttgggtcctc tggctctctg ccaagtcttc cagccactcg agggagaaat atcgggaggt	180
ttgacttctt ccggggcttt ccgaggggtc tcccggtgag ccttgccgac ctcagggctg	240
caaccctgga ttcaatgtct gaaacctcgc tctctgcttg ctggacttct ggggcgctca	300
ctgocactct gtctccagc tctgacagct cctcatctgt ggtcctgttg t	351

<210> 362

<211> 463

<212> DNA

<213> Homo sapien

<400> 362

acttcaatcag gccataatgg gtgcctcccg tgagaatcaa agcacctttg gactgcgcga	60
tgcagatgag ccggtctgaag atcttgccga tgcgcggctt cagggggaag ttcttggcgc	120
ccccggtcac agaaatgacg aggttgggtg ttttcaggtg ccagtactgg gtcagcagct	180
cgtaaaggat ttccgcgtcc gtgtcgcagg acagacgtat atacttccct ttcttcccca	240
gtgtctcaaa ctgaatatcc ccaaaaggct cggtaggaaa ttcttgggtg tgttctctgt	300
agttccattt ctcactttgg ttgatctggg tgccctccat gtgtggtctc tgggcatagc	360
caracttgcg cacattctcc ctgataagca cgtatggtgt gacagggaag aaggatttca	420
ctgagcctgc ttatggaaac tggatatgtt agcttaaacg gar	463

<210> 363

<211> 653

<212> DNA
 <213> Homo sapien
 <220>
 <221> misc_feature
 <222> {1}...{653}
 <223> n = A,T,C or G

<400> 363

accercaggt	ncctgnetgg	catactgnga	acgaccaacg	acacacocaa	gctcggcctc	60
ctcttgngga	ttctgggtga	cattcttcatg	aatggcaacc	gtgccagwga	ggctgtcttc	120
tgggaggrac	tacgcaagat	gggactgcgt	cctggggtga	gacatctctc	cottggagat	180
ctaacgaacc	ttctcaccta	tgagttgtaa	agcagaatat	cctgnactac	agacgagtgc	240
ccaacagcaa	ccccccggaa	glatgagttc	ctctryggcc	tccgttctta	ccatggagac	300
tagcaagatg	naagtgttga	gatlcatthy	agaggttcag	aaaagagacc	cntcgtgact	360
ggtctgcacg	gttcatggag	gctgcagatg	aggccttggg	tgctctggat	gctgctgcag	420
ctgaggccga	agccccgggt	gaagcaaggaa	cccgratggg	aatggagat	gaggctgtgt	480
ntgggcccctg	gagctgggat	gacatttgagt	ttgagctgct	gacctgggat	gagggaaggag	540
atcttggaga	tccntggtcc	agaattccat	ttaccttctg	ggccagatac	caccagatg	600
cccgtccag	attccctcag	acctttgccc	gtcccattat	tggtcstggg	ggc	653

<210> 364
 <211> 401
 <212> DNA
 <213> Homo sapien

<400> 364

actagaggaa	agacgttaaa	ccactctact	accanttgty	gaactctcaa	aggytaastg	60
acaasgcca	tgaatgactc	taaaaaaca	atttaratlc	aatggtttgt	ngacaataaa	120
aaaacaaggt	ggaatagatc	agaattgtaa	cattttbaaya	aaaccatagc	atttgacaga	180
tgagaaagct	caattacaga	tgcaaaagtt	taactaaact	actatagtag	taaagaaata	240
catttcacac	ccctcatata	aattcactat	cttggcttga	ggcactccat	aaaatgtatc	300
acgtgcatag	taaatcttta	tatttgctat	ggcgttgcac	tggaggactt	ggactgcaac	360
angtggatgc	guggaazaatg	aaatcttctt	caatagccca	g		401

<210> 365
 <211> 356
 <212> DNA
 <213> Homo sapien

<400> 365

ccagtgtcat	atttgggctt	aaaatttcaa	gaagggcact	tcaaatggct	ttgcatttgc	60
atgtttcagt	gctagagcgt	aggaatagac	cctggcgctc	actgtgagat	gttcttcagc	120
taccagagca	tcaagtctct	gcagcaggtc	attcttgggt	aaagaaatga	cttccacaaa	180
ctctccatcc	cctggctttg	gcttcgggct	tgcgttttcg	gcattcatct	cgtaaatggt	240
gactgtcacg	atgtgtatag	tacagtttga	caagcctggg	tccatacaga	ccgttggaga	300
acattcggca	atgtuccctt	tgtagccagt	ttcttcttcg	agctcccgga	gagcag	356

<210> 366
 <211> 1851
 <212> DNA
 <213> Homo sapien

<400> 366

tcatacccat	cgcacgcagc	ggcaccgtaa	gtcaggtttt	ctgggaatcc	cacatgagta	60
------------	------------	------------	------------	------------	------------	----

cttccggtgtt	ottcattctt	cttcaatagc	cataaatctt	ctagctctgg	ctggctgttt	120
tcacttctt	taagcttctg	tgactcttcc	tcgatgttca	gcttcaagtc	ttgttctgga	180
ttgctgtttt	cugaagagat	ttttaacatc	tytttttctt	tgtagtcaga	aagtaactgg	240
caaatctacat	gatgatgact	agaaacagca	cactctctgg	ccgtcttctc	agatcttgag	300
aagatcacatc	aacatttttg	tcaggtagag	ggctgactat	acttgctgat	ccacaacata	360
cagcaaglat	gagagcagtt	cttccatata	tatccagcgc	atttcaatcc	gcttttttct	420
tgattaaaaa	tttcaacact	tgctgttttt	gctcatgtat	accgaagtagc	agtgggtgtga	480
ggccatgctt	gttttttgat	tcgatatacg	caccgtataa	gagcagtgct	ttggccatta	540
atttactctt	attgtaggca	gcatagtgta	gagtggtatt	tcataactca	tcctggatct	600
ttggatcagt	gccatgttcc	agcaacatta	acgcacattc	ntcttctctg	cattgtacgg	660
cccttgtcag	agctgtccct	tttttcttgt	caaggacatt	aagttgacat	cgtctgtcca	720
gcacgagttt	tactacttct	gaattcccat	tgccagaggc	cagatgtaga	gcagtcctct	780
tttgcctgtc	cccttctgtt	acatccgtgt	ccctgagcat	gacgatgaga	tcctttcttg	840
ggactttacc	ccaccaggca	gcttctgtga	gcttgtccag	atcttctcca	tggaagtgtt	900
acctggggtc	catgaaggcg	ctgtcatcgt	agctctccca	agcgactacg	ttgtctctgc	960
cgtctccctg	caycaggggg	agcagtgcca	gcaccacttg	cacctcttgc	tcaccaagcgt	1020
cttcacagag	gagtcgttgt	ggctctccag	agtgcaccag	ttgtctctgc	cgtctccctt	1080
gtccatccag	ggagggaagaa	atgcaggaaa	tgaaagatgc	atgcacgatg	gtatactctt	1140
cayccatcaa	acttctggac	agcaggtcac	ttccagcaag	gtggagaaag	ctgttccacc	1200
acagaggtatg	agatccagaa	accacaatat	ccattcacaa	acaaacactt	ttcaagccaga	1260
ccaggttact	gaatcatgt	catctgcggc	aacatggtgg	aacctaccca	atcacacatc	1320
aagaggtgaa	gacactgcag	tatatctgca	caacgttaata	ctcttcatcc	ataacaaat	1380
aatataattt	tcctctgggg	ccttatggat	gaactatgaa	ggaagaactc	ccgaagaaag	1440
ccagtcggcag	agaagccaca	ctgaagctct	gtctctcagc	atcagcgcca	cggacaggag	1500
tgtgtttctt	ccccagtgat	gcagcctcaa	gttatcccca	agctgcggca	gcacacggctg	1560
gctcttgaga	aaccacccag	ctcttccggg	ctcacacagg	caagtcaata	aatgtgttaa	1620
tcacataaac	agaattaaaa	gcgaagtcac	ataagcatct	cancagacac	agaaagggca	1680
tttgacaaan	tcagcatccc	ttgtatttat	tgtygcagtc	ctcagaggaa	atgctctctaa	1740
cttttcccca	tttagtatta	tggtggctgt	gggtctgtca	caggtgggtt	ttattacttt	1800
aaggatgttc	ccctctatgc	ctgtttctgt	gaggggtttt	attctcgtgc	c	1851

<210> 367

<211> 664

<212> DNA

<213> Homo sapien

<400> 367

cttgagcttc	caantaygga	agactggccc	ttacacacgt	caatgtttaa	atgaatgcat	60
ttcagtatit	tgaaagataa	atttgtagat	ctataccttg	ttttttgatt	cgatatcagc	120
acortataag	agcagtgctt	tggccattaa	tttatctttc	atcttagaca	gcttagtgya	180
gagtggtatt	tcataactca	tctggaaatc	tcggatcagt	gccatgttcc	agcaacatta	240
acgcacattc	atcttccctgg	cattgtacgg	crtgtcagta	ctagacccaa	aaacaaatta	300
catatctcag	gaattcaaaa	taacattcca	cagctttcac	caactagtta	tatttaagg	360
agaaaaccca	tttttatgcr	atgtattgaa	atcaaaccca	ctcatgctg	atatagttgg	420
ctactgcata	cccttatcag	agctgtcctc	tttttgttgt	caaggacatt	aagttgacct	480
cgtctgtcca	gcagtgagtt	tactacttct	gaattcrrat	tggcagaggc	cagatgtaga	540
gcagtcctat	gagagtgaga	agacttttta	ggaaattgta	gtgcactagc	ccagccata	600
gcaatgattc	atgtaactgc	aaacactgaa	tagcctgtca	ttactctgcc	ttcaaaaaaa	660
aaaaaaa						668

<210> 368

<211> 1512

<212> DNA

<213> Homo sapien

<400> 368

gggtcgccca	gggggagcgt	gggctttcct	gggtggggtg	tgggttttcc	ctgggtgggg	60
tgggctgggc	trgaatcccc	tgctgggggt	ggcaggtttt	ggctggggtc	gactcttctc	120
ttcaaacaga	ttggaaaccc	ggagttacct	gctagtgggt	gaaactgggt	ggtagacgcg	180
atctgttggc	tactactggc	ttctccctgg	tgttaaaagc	agatgggtgg	tgggttggat	240
tccatgcccg	ctgcttcttc	tgtgaagaag	ccatttgggt	tcaggagcaa	gatgggcaag	300
tgggtgctgc	gttgccttcc	ctgctgcagg	gagagcggca	agagcaacgt	gggcacttct	360
ggagaccacg	acgactctgc	tatgaagaca	ctcaggagca	agatgggcaa	gtgggtgcgc	420
cactgcttcc	cctgctgcag	ggggagtggt	aaggagcaacg	tgggcgcttc	tggagaccac	480
gacgagtctg	ctatgaagac	actcaggaac	aagatgggca	agtgggtgctg	ccactgcttc	540
ccctgctgca	gggggagcrg	caagagcaag	gtgggcgctt	ggggagacta	cgatgacagt	600
gccttcatgg	agcccaggta	ccacgtccgt	ggagaagatc	tggacaagct	ccacagagct	660
gccttggggg	gtaaagtccc	cagaaaggat	ctcatcgtca	tgctcaggga	cactgacgtg	720
acraagaagg	acaagcnaaa	gaggactgct	ctacatctgg	cctctgccaa	tgggaattca	780
gaagttagta	aactcctgct	ggacagacga	tgtcaactta	atgtccttga	caacnaaaag	840
aggacagctc	tgayaaaggc	cgtacaatgc	caggaaagatg	aatgtgcgtt	aatgttgcgtg	900
gaacatggca	ctgatccaaa	tattccagat	gagtatggan	ataccactct	rcactaygct	960
rtctayaatg	aagataaatc	aatggccaaa	gactgctctt	tataygggtc	tgatatacga	1020
tcaaaaaaca	aggtatagat	ctactaattt	latcttcaaa	atactgaaat	gcattcattt	1080
taacatcga	gtgtgttaagg	gccagctctc	cgtatttggg	agctcaagca	taacttgaat	1140
gaaaatattt	tgaaatgacc	taactatctm	aguctttatt	ttaaatatgt	ttattttcaa	1200
agaagcattt	gaggttagag	ttttttttct	ttaaatgcac	ttctggtaaa	taacttttgt	1260
gaaaacactg	aattttgcaa	aggttaatac	tactattttt	caattttctc	ctccaggat	1320
ttttttcccc	taatgaatgt	aagatggcaa	aatttgcctc	gaaatagggt	ttacatgaaa	1380
actccagaa	aagttaaaac	tgtttcagt	aatagagatc	ctgcctcctt	ggcaagttcc	1440
tcaaaaacag	taattgatat	gaggtgatgc	gcctgtcagt	ggcaagggtc	aagatatttc	1500
tgatctctgt	cc					1512

<210> 369

<211> 1853

<212> DNA

<213> Homo sapien

<400> 369

gggtcgccca	gggggagcgt	gggctttcct	gggtggggtg	tgggttttcc	ctgggtgggg	60
tgggctgggc	trgaatcccc	tgctgggggt	ggcaggtttt	ggctggggtc	gactcttctc	120
ttcaaacaga	ttggaaaccc	ggagttacct	gctagtgggt	gaaactgggt	ggtagacgcg	180
atctgttggc	tactactggc	ttctccctgg	tgttaaaagc	agatgggtgg	tgggttggat	240
tccatgcccg	ctgcttcttc	tgtgaagaag	ccatttgggt	tcaggagcaa	gatgggcaag	300
tgggtgctgc	gttgccttcc	ctgctgcagg	gagagcggca	agagcaacgt	gggcacttct	360
ggagaccacg	acgactctgc	tatgaagaca	ctcaggagca	agatgggcaa	gtgggtgcgc	420
cactgcttcc	cctgctgcag	ggggagtggt	aaggagcaacg	tgggcgcttc	tggagaccac	480
gacgagtctg	ctatgaagac	actcaggaac	aagatgggca	agtgggtgctg	ccactgcttc	540
ccctgctgca	gggggagcrg	caagagcaag	gtgggcgctt	ggggagacta	cgatgacagy	600
gccttcatgg	akcccaggta	ccacgtccct	ggagaagatc	tggacaagct	ccacagagct	660
gcctgggtgg	gtaaagtccc	cagaaaggat	ctcatcgtca	tgtcaggga	cackgaygtg	720
aaacagargg	acaagcnaaa	gaggactgct	ctacatctgg	cctctgccaa	tgggaattca	780
gaagttagta	aactcctgct	ggacagacga	tgtcaactta	atgtccttga	caacnaaaag	840
aggacagctc	tgayaaaggc	cgtacaatgc	caggaaagatg	aatgtgcgtt	aatgttgcgtg	900
gaacatggca	ctgatccaaa	tattccagat	gagtatggan	ataccactct	rcactaygct	960
rtctayaatg	aagataaatc	aatggccaaa	gactgctctt	tataygggtc	tgatatacga	1020
tcaaaaaaca	agcatggcct	cacaccactg	ytacttggtr	tacatgagca	aaaacagcaa	1080
gtsgtgaaat	ttttaatya	gaaaaaagcg	aatttcaaat	gcrcaggata	gatatgggag	1140
raetgctctc	atacttgcgt	tatgttgcgt	atcagcaagt	atagtragcc	ytctacttga	1200
gcaaaatrtt	gatgtatctt	ctcaagatct	ggaaagacgg	ccagagagta	tgtgcttctt	1260

agtcacacac	atgtcatttg	ccngttactt	tctgactara	aagaaaaaca	gAtgttaaaa	1320
atctctctcy	aaaacagcau	tccagAACan	gacttaaggr	tgacatcagh	ggaaagagtca	1380
caaaaggctta	aagyaagTga	aaacagccag	ccagaggcat	ggaaactttt	aaattttaaac	1440
ttttgggttta	atgttttttt	tttttgccct	aataatatta	galagtcrra	aatgaatwa	1500
ccatagagac	caggctttga	gaatcaatag	atctcttttt	taagaatctt	ttggctagga	1560
gcgggtgtctc	acgcctgtaa	ttccagoccc	ttgagagggt	gaggtgggca	gatcargaga	1620
tcaggagatc	gagaccatcc	tggtcaaacr	ggTgaaaccc	catctctact	aaaaatacna	1680
aaacttggct	gggtgtgtgt	gcgggtgtgt	gtagtcocag	ctactcagga	rgctgaggca	1740
ggagaatggc	atgaacccgg	gaggtggagg	ttgcagtga	ccgagatccg	ccactacact	1800
ccagcctggg	tgacagagca	agactctgtc	tcaaaaanaa	aaaaaanaaa	aaa	1853

<210> 370

<211> 2184

<212> DNA

<213> Homo sapien

<400> 370

ggcagaggua	ttAanaccc	cagcaaaaca	ggcatagaag	ggacatacct	taaagtaata	60
aaacacaccc	ntgacaagcc	cacagcccau	ataatactaa	atgggggaaa	gttagaagca	120
tttccctctga	gaactgcac	aataaataca	aggatgctgg	atctttgtcaa	atgccttttc	180
tgtgtctgtt	gagatgctta	tgtgacttly	cttttaattc	tgtttatgtg	attatcacat	240
ttattgaactt	gccttgttta	gacgggaaga	gctgggggtg	ttctcaggag	ccacogtgtg	300
ctggggcagc	ttcgggataa	cttgaggctg	catcacagg	gaagaaacac	aytccctgtcc	360
gtgggagctga	tggtctgngga	cagaguttea	gtgtggtctc	btgtgagctg	gcttcttcgg	420
ggagttcttc	cttcatagtt	cateratag	gtccagagg	aaaattatat	tattttgtta	480
tggtatgaaga	gtattacgtc	gtgcagatat	actgcngtgt	cttcactctc	tgatgtgtga	540
ttgggttaggt	tccaccatgt	tgccgcagat	gacatgatit	cagtacutgt	gtctggctga	600
aaagtgtctg	tttgtgaatg	gatattgttg	tttctggatc	tcatctctcy	tgggtggaca	660
gctttctcca	ccttgctgga	agtgaactgc	tgtccagaag	tttgatggct	gaggagtata	720
ccatcgtgca	tgratctttc	atctcctgca	tttcttcttc	cctggatggg	cagggggagc	780
ggcaagagca	acgtggggca	ttctggagac	cacaaagact	ctctctgtga	gacgcttggg	840
agcaagagggt	gcaagtgggt	ctgrractgc	ttcccttctc	gcnggggagc	ggcaagagca	900
acgttggtcgc	ttggggagag	tacgatgaca	gcgcttcat	ggatccaggg	taccacgtcc	960
atggagagga	tctggagcag	ctccauagag	ctgocctggg	gggtaaagtc	cccagaaggg	1020
Atctcatcgt	catgctcagg	gncacggatg	tgaacaaag	ggacaaagca	aaagaggactg	1080
ctctacatct	ggcctctgcr	aalgggaatt	cagaagttagt	aaactcgtg	ctggacagac	1140
gatgtcaact	taatgtccct	gacaacaaa	agaggacngc	tcr,gaacaa	grecgtacat	1200
gccaggaaga	tgaatgtggg	ttaatgttgc	tggaaatagg	cactgatccr	aatattccag	1260
atgagtatgg	aaataccact	ctacactatg	ctgtctacaa	tgaagataaa	ttaatggcca	1320
aagcactgct	cttatacggg	gctgatatcg	aatcaaaa	caagcatggc	ctacacccac	1380
tgctacttgg	tatacatgag	caaaaacagc	aagtgggtga	atlttttaatc	aagaaanaag	1440
cgaatttaaa	tgcgctggat	agatatggaa	gaactgctct	catacttgrt	gtatgttgtg	1500
gatcagcagg	tatagtacgc	ccctcacttg	agcaaatgrt	tgatgtatct	trccangatc	1560
tggaaagagc	gccagagagt	atgctgtttc	tagtcacat	catgtaatit	gccagltact	1620
ttctgactac	aaagaaaaac	agatgttaaa	aatctctctc	gaaaacagca	atccagaaac	1680
agacttaag	ctgacatcag	agyaagagtc	acaaaggctt	aaagggaagt	aaaacagcca	1740
gccagaggca	tggaaacttt	caaatcttaa	cttltgggtt	aatgtctttt	tttlttgctt	1800
taataatant	agatagctcc	aatgaatw	acctatgaya	ctaggctttg	agaatcaata	1860
gattcttttt	tcaagaatct	tttggttagg	agcgggtgtc	cacgcctgta	attccagcac	1920
cttgagaggc	tgaggtgggc	agatcacgag	atcaggagat	cagagccatc	ctggctaaca	1980
cgggtgaacc	ccatctctac	taaaataaca	aaaacttagc	tgggtgtggg	ggcgggtgct	2040
tgtagctcca	gtacttcagg	argctgagge	aggagaattg	catgaacccg	ggaggtggag	2100
gttgacgtga	gccgagatcc	gccactacac	tcragcctgg	gtgacagagc	aatgctctgt	2160
ctcaaaaaaa	aaaaaanaaa	aaaa				2184

<210> 371
 <211> 1855
 <212> DNA
 <213> Homo sapien

 <220>
 <221> misc_feature
 <222> (1)...(1855)
 <223> n = A,T,C or G

<400> 371
 tgcacgcacg ggcacgtgbc tgtgccacgt acactgacgc cccctgagat gtgcacgcgc 60
 caccgcgcacg ttgcacgcgc ggcacgtgbc tggctggcct gtacacgcct gcacgcgcac 120
 guccgccccc cataacgcgc agactggcct glaacggcct gcaggcgac gccgcacgcg 180
 cgtaacggct tggctggcct gtacacgcct gcacgtgcat gctgcacgcg cgttaacggc 240
 ttggctggca tgtagcgcct tggctggcct tggcatttct tggctggcct ggcgttgkty 300
 tcttggattg augettcctc cttggatkgc cgtttcctcc ttggatkgc gtttcytyty 360
 tcgcgttctt ttgcctggcct tgccttttct tctgctgggt tcggcattcc ttgggggtgg 420
 gctgggctgt ttctccgggg gggkkygc tctctggggt gggcgtgggk cgcctccagg 480
 gggcgtgggc ttctccgggg tgggtgtggg ttttctctgg gtggggtggg ctgtgctggg 540
 atcccccctg tgggggtggg agggattgac ttttctctcc aaacagattg gaaacccggg 600
 gtaacntgct agttggctgaa actggttggg agacgcgac tggctggatc actgtttctc 660
 ctggctgtta aaagcagatg gtggctgagg ttgattcaat gccggctgct tcttctgtga 720
 agaagccatt tggctcagg agcaagatgg gcaagctggg cggcactgct tccctgtctg 780
 cagggggagg ggcacagagg acgtgggcac ttttggagac caacaacgac cctctgtgaa 840
 gacgcttggg agcaagagg gcaagtggtg ctgcccactg ctctccctgc tgcagggggg 900
 cggcagaggc aactgtggkcg cttggggaga ctargatgac agcgccttca tggakccag 960
 gtacacacgt cctgggagag atctggacaa gctccacaga gctgcttggg ggggtaaaat 1020
 cccragaaag gatctcctcg tcatgctcag ggacartgag gtgaaacaga rygacaagca 1080
 aaagaggact gctctacatc tggcctctgc caatgggaat tcagaagtag taaaactcgt 1140
 gctggacagg ccatgtcnaa ttaatgtcct tgacaacaaa aagaggacag ctctgacaaa 1200
 ggcctgtaca tgcacaggag atgaatgtgc gttaatgttg ctgggaacatg gctctgctcc 1260
 aaatatctcc gatygatctg gaaataccac tctacactat gotgtctaca atgaagataa 1320
 attaatggcc aaagcactgc tcttatcagg tgcctgctat gaatcaaaaa acaaggctata 1380
 gatctaccaa ttttatcttc aaaatactga aatgcattcc ttttaacatt gacgtgtgta 1440
 agggccagtc ttcctgattt ggaagctcaa gcatnacttg aatgaaataa ttttgaatat 1500
 acctaatat ctaagacttt atcttaataa ttgltatttt caaagaagca ttagagggtg 1560
 cagttttttt tttctaaatg cacttntggg aaatactttt gttgaaataa ctggaattgt 1620
 aaaaggtaat acttactatt ttcaattttt tccctcctag gatctttttt ccttaactga 1680
 tgaagatgg caaaatttgc cctgaatatg gttttacatg aaaaactcaa gaaaggtcaa 1740
 acatgtttca gtgaatagag atcctgctcc tttggcaagt tcttaaaaaa cagtaataga 1800
 tacgagggtg tggcctgtgc agtggcaagg ttaagatat tctgatctc gtgac 1855

<210> 372
 <211> 1059
 <212> DNA
 <213> Homo sapien

<400> 372
 gcaacgtggg cacttctgga gaccacaaag actcctctgt gaagacgctt gggagcaaga 60
 ggtgcaagtg gtgctgccc ctccttcccc tgcctgaggg gaggggcaag agcaacgtgg 120
 ggccttgggg agactmcgat gacagggcct ccatggagcc caggtaaccac gtccgtggag 180
 aagatctgga caagctccac agagctgccc tgggtggggtt aagtcctccag aaaggatctc 240
 atcgtcatgc tcaggggacac tgaygtgaac agaggggaca agcaaaagag gactgctcta 300
 cabctggcct ctgccaatgg gcatctcaga gtagtcaaac tcttggctgga cagacgatgt 360

caacttaattg	tacttggacuu	caaaaagaggg	acagctctcga	yaaaggccgt	acaatgcrag	420
gaagatgaat	gtgcgttaat	gttgcgtggaa	catggcactg	atccanatat	tccagatgag	480
tatggaaata	ccacccctca	ctaygccttc	tayaatgaag	ataaatcaat	ggccaaagca	540
ctgctcttat	aygggtgctga	tatcgaatca	aaaaacaaagg	tatagatcta	ctaatttlat	600
cttcanaata	ctgaactgca	ttcattttta	cattgacgtg	tgtaagggcc	agtcttccgt	660
atttgggaagc	tcaagcataa	cttgaatgaa	aatatttttga	aatgacctaa	ttatctaaag	720
cttctatttta	aataatgtta	tttccaaaga	agcatttagag	ggcacagtct	ttttttttta	780
aacgcacttc	tggtaaatac	ttttgttgaa	aaacactgaat	ttgtaaaagg	taatacttac	840
tatttttcaa	tttcttccctc	ctaggatttt	tttccctcaa	tgaatgttaag	atgycaaaaat	900
ttgccctgaa	ataggtttta	catgaaaact	ccaaagaaaag	ttaaacatgt	ttcagtgaaat	960
agagatccctg	ctccttttggc	aagtttctta	aaaacagttaa	tagatcacgag	gtgatgcggc	1020
tgtcagtggtc	aagggtttaag	atattttctga	tctcgtgccc			1059

<210> 373

<211> 1155

<212> DNA

<213> Homo sapien

<400> 373

atgggtgggtt	aggttgattc	catgccgggt	gcctcttctg	tgaagaaagcc	atctgggtctc	60
aggaagcaaga	tgggcnagt	gngctgcccgt	tgccttccct	gctgcagggga	gagcggcaag	120
agcaacgtgg	gcacttctgg	agaccacgac	gaactctgcta	tgaagacact	caggagcaag	180
atgggtcaagt	ggctgcccga	ctgcttcccc	tgctgcaggg	ggagtggcaa	gagcaacgtg	240
ggcgcttctg	ggagaccagc	cgactctgct	atgaagacac	tcaaggaaaca	gatgggcaag	300
tgggtgctgcc	actgcttccc	ctgctgcccag	gggagcggca	agagcaaggt	gggcgcttgg	360
ggagacttacg	atgacagtgc	cttcatggag	ccuaggtacc	acgtccgtgg	agaagatctg	420
gacaaagctcc	acagaactgc	ctgggtgggt	aaagtcccc	gaaaggatct	catctgcatg	480
ctcagggaca	ctgacgtgaa	caagaaaggac	aaacaaagaa	gaactgctct	ccatctggcc	540
tctgccaagt	ggaattcaga	agtagtataa	ctcctgctgg	acagacgatg	tcaacttaat	600
gtccttgaca	acaaaaagag	gaagctctg	ataaaaggccg	tacantgcca	ggaagatgaa	660
tgtgctgtaa	tgttgcctga	acatggcaat	gatccaaata	ttccagatga	gtatgggaat	720
accactcgcg	actacgtcat	ctatantgaa	gatantataa	tggccaaagr	actgctctta	780
tatgggtgctg	atctgaatc	aaaaaaacag	catggcctca	caccactgtt	acttgggtga	840
catgagcaca	acagcaagtc	cgtgaaattt	ttaatcaaga	aaaaagcga	tttaaatgca	900
ctggatagat	atggaaggac	tgcctctata	cttgcctgat	gttgcggtac	agcaagtata	960
gtcagccttc	tacttgayca	aaatathgat	gtatctctct	aaagatctatc	tggacagacg	1020
gcccagagag	atgctgtttc	taytcatcat	catgtaaatt	gccaacttatc	ttctgactac	1080
aaagaaaaac	agatgctaaa	aatctctctc	gaaaacagca	atccagaaac	tgtctcaaga	1140
accagaaata	aataa					1155

<210> 374

<211> 2000

<212> DNA

<213> Homo sapien

<400> 374

atgggtgggtt	aggttgattc	catgccgggt	gcctcttctg	tgaagaaagcc	atctgggtctc	60
aggaagcaaga	tgggcnagt	gtgctgcccgt	tgccttccct	gctgcagggga	gagcggcaag	120
agcaacgtgg	gcacttctgg	agaccacgac	gaactctgcta	tgaagacact	caggagcaag	180
atgggtcaagt	ggctgcccga	ctgcttcccc	tgctgcaggg	ggagtggcaa	gagcaacgtg	240
ggcgcttctg	ggagaccagc	cgactctgct	atgaagacac	tcaaggaaaca	gatgggcaag	300
tgggtgctgcc	actgcttccc	ctgctgcccag	gggagcggca	agagcaaggt	gggcgcttgg	360
ggagacttacg	atgacagtgc	cttcatggag	ccuaggtacc	acgtccgtgg	agaagatctg	420
gacaaagctcc	acagaactgc	ctgggtgggt	aaagtcccc	gaaaggatct	catctgcatg	480
ctcagggaca	ctgacgtgaa	caagaaaggac	aaacaaagaa	gaactgctct	ccatctggcc	540

tctgcccattg	ggaaatccaga	agtagtaaaa	ctcctgctgg	acagacgatg	tcaacttaant	600
gtccttgaca	acaaanaagag	gacagctctg	ataaaggccg	tacaatgcra	ggaagatgaa	660
tgtgctttaa	tgttgctggg	acatggcact	gatcccaata	tcccagatga	gtatggaaat	720
accactctgc	actacgctat	ctataatgaa	gataaattaa	tggccaaagc	actgctctta	780
tatggtgctg	atatcgaaatc	aaaaaaccaag	catgggcctca	caccactgtt	acttgggtgta	840
catgagcaca	aaacagcaagt	cgtgaaattt	ttaatcaaga	aaaaagcgaa	tttaaatgca	900
ctggatagat	atgggaagga	tgtctctata	cttgcctgtat	gttgtggatc	agcaagtata	960
gtcagccttc	tacttgagca	aaatattgat	gtatcttctc	aagatctatc	tggacagacg	1020
gccagagagt	atgctgcttc	tagtcatcat	catgtaattt	gccagttact	ttctgactac	1080
aaagaaacac	agatgctaaa	aatcctcttct	gaaaacagca	atccagaaca	agacttaag	1140
ctgacatcag	aggaaagagtc	acaaagggtcc	aaaggcagtg	aaaatagcca	gccagagaaa	1200
atgtctcag	aaacagaaat	aaataaggat	ggtgatagag	aggttgaaga	agaaatgaag	1260
aaacatgaaa	gtaataatgt	gggattacta	gaaacactga	ctaattgggtg	cactgctggc	1320
aatggtgata	atggattaat	tccctcaagg	aagagcagaa	cacctgaaca	tcagcaattt	1380
cctgacaacg	aaagtgaaga	gtatcacaga	atttgcgaat	tagtttctga	ctacaaagaa	1440
aaacagatgc	caaaatactc	ttctganaac	agcaacccag	aacaagactt	aactgtgaca	1500
tcagagggaag	agtcacaaag	gcttgagggc	agtgaataatg	gccagccaga	gctagtaaat	1560
tttatggctn	tcgaagaaat	gaagaaagcar	ggaagtactc	atgtgggatt	ccragsaaac	1620
ctgactaatg	ghgcactgc	tggcaatggc	gatgatggat	taatttctcc	aaggaagagc	1680
agaacacctg	aaagccagca	atttccctgac	actgagatg	aagagtatca	cagtgaacaa	1740
caaaatgata	ctcagaaagca	atttctgtga	gaacagaaca	ctggatattt	acacgatgag	1800
atttctgattc	atgaagaaaa	gcagatatgaa	gtgggtgaaa	aatgaartc	tgagctttct	1860
cttagattgta	agaaagaaaa	agacatcttg	catgaaata	gtacgttgcg	ggaaagaaatt	1920
gccatgctaa	gactggagct	agacacaaatg	aaacatcaga	gccagctaaa	aaaaaaacaa	1980
aaaaaaacaa	aaaaaaacaa					2000

<210> 375

<211> 2040

<212> DNA

<213> Homo sapien

<400> 375

atgggtgggtg	aggctgattc	catgcaggct	gctctctctg	tgaagaaagcc	atttgggtctc	60
aggagcaca	tgggcaagtg	gtgctgctgt	tgcttccctt	gctgcaggga	gagcggcaag	120
agcaacgtgg	gcacttctgg	agaccacgac	gactctgcta	tgaagacact	caggagcang	180
atgggcaagt	ggtgctggca	ctgcttcccc	tgtgctaggg	ggagtggcaa	gagcaacgtg	240
ggcgcttctg	gagaaacacga	cgactctgct	atgaagacac	tcaggaacaa	gahgggcaag	300
tgggtgctg	actgcttccc	ctgctgcagg	gggggcygca	agagcaaggc	gggcgcttgg	360
ggagactacg	atgacagtgc	cttcatggag	cccaggtacc	acgtccgtgg	agaaagatctg	420
gacaagctcc	acagagctgc	ctgggtgggt	aaagtcccca	gaaaggatct	catcgtcatg	480
ctcagggaca	ctgacgtgaa	caagaaggac	aagcaaaaga	ggactgctct	acatctggcc	540
tctgccaatg	ggaaatccaga	agtagtaaaa	ctcctgctgg	acagacgatg	tcaacttaant	600
gtccttgaca	acaaaagag	gacagctctg	ataaaggccg	tacaatgccr	ggaagatgaa	660
tgtgctttaa	tyltgctgga	acatggcact	gatccaaata	tcccagatga	gtatggaaat	720
acacactctgc	actacgctat	ctataatgaa	gataaattaa	tggccaaagc	actgctctta	780
tatgggtgctg	atatacgaaatc	aaaaacaaag	catggcctca	caccactglt	acttgggtgta	840
catgagcaaa	aaacagcaagt	cgtgaaattt	ttaatcaaga	aaaaagcgaa	cttaaatgca	900
ctggatagat	atgggaaggac	tgtctctata	cttgcctgtat	gttgtggatc	agcaagtata	960
gtcagccttc	tacttgagca	aaatattgat	gtatcttctc	aagatctatc	tggacagacg	1020
gccagagagt	atgctgttct	tagtcatcat	catgtaattt	gccagttant	ttctgactac	1080
aaagaaaaac	agatgctaaa	aatctcttct	gaaaacagca	atccagaaca	agacttaag	1140
ctgacatcag	aggaagagtc	acaaaggttc	aaaggcagtg	aaaatagcca	gccagagaaa	1200
atgtctcaag	aaccagaaat	aaataaggat	ggtgatagag	aggttgaaga	agaaatgaag	1260
aagcatgaaa	gtaataatgt	gggattacta	gaaaacctga	ctaattgggtg	cactgctggc	1320
aatggtgata	atggattaat	tccctcaagg	aagagcagaa	cauctgaaaa	ccagcaattt	1380

```

cctgacaacg aaagtgaaga gtatcacaga atttgcgaat tagttttotga ccacnaagaa 1440
aaacagatgc cacaatactc ttctgaaac agcaaccag aacaagactt aaagctgaca 1500
tcagagggaag agtcacaaag gcttgagggc agtganaatg gccagccaga gaaaagatct 1560
caagaaccog aaatanataa ggalgggtgat agagagctag aaaaatttat ggctatcgaa 1620
gaaatgaaga agracggaag tactcatgtc ggattccag aaaaacctgac taatgggtgrr 1680
actgctggca atgggtgatga tggattaatt cctccaaggg agagcagaac acctgaagc 1740
cagcaatttc ctgacactga gaatgaagag tatcacagtg acgaacaaaa tgatactcag 1800
aagcaatttt gtgangaaca gaacactgga atattacacg atgagattct gattcatgaa 1860
gaaaagcaga tagaagtggg tgaaaaaatg aattctgagc ttctctcttag ttgtaagaaa 1920
gaaaaagaca tcttgratga aaatagtarg ttgcgggag aaattgcat gctgaagactg 1980
gagctagaca caatgaadaca tcagagccag ctaaaaaana aaaaaaanaa aaaaaaanaa 2040

```

<210> 376

<211> 329

<212> PRT

<213> Homo sapien

<400> 376

```

Met Asp Ile Val Val Ser Gly Ser His Pro Leu Trp Val Asp Ser Phe
 1          5          10          15
Leu His Leu Ala Gly Ser Asp Leu Leu Ser Arg Ser Leu Met Ala Glu
 20          25          30
Glu Tyr Thr Ile Val His Ala Ser Phe Ile Ser Cys Ile Ser Ser Ser
 35          40          45
Leu Asp Gly Gln Gly Glu Arg Gln Glu Gln Arg Gly His Phe Trp Arg
 50          55          60
Pro Gln Arg Leu Leu Cys Glu Asp Ala Trp Glu Gln Glu Val Gln Val
 65          70          75          80
Val Leu Pro Leu Leu Pro Leu Leu Gln Gly Ser Gly Lys Ser Asn Val
 85          90          95
Val Ala Trp Gly Asp Tyr Asp Asp Ser Ala Phe Met Asp Pro Arg Tyr
100          105          110
His Val His Gly Glu Asp Leu Asp Lys Leu His Arg Ala Ala Trp Trp
115          120          125
Gly Lys Val Pro Arg Lys Asp Leu Ile Val Met Leu Arg Asp Thr Asp
130          135          140
Val Asn Lys Arg Asp Lys Gln Lys Arg Thr Ala Leu His Leu Ala Ser
145          150          155          160
Ala Asn Gly Asn Ser Glu Val Val Lys Leu Val Leu Asp Arg Arg Cys
165          170          175
Gln Leu Asn Val Leu Asp Asn Lys Lys Arg Thr Ala Leu Thr Lys Ala
180          185          190
Val Gln Cys Gln Glu Asp Glu Cys Ala Leu Met Leu Leu Glu His Gly
195          200          205
Thr Asp Pro Asn Ile Pro Asp Glu Tyr Gly Asn Thr Thr Leu His Tyr
210          215          220
Ala Val Tyr Asn Glu Asp Lys Leu Met Ala Lys Ala Leu Leu Leu Tyr
225          230          235          240
Gly Ala Asp Ile Glu Ser Lys Asn Lys His Gly Leu Thr Pro Leu Leu
245          250          255
Leu Gly Ile His Glu Gln Lys Gln Gln Val Val Lys Phe Leu Ile Lys
260          265          270
Lys Lys Ala Asn Leu Asn Ala Leu Asp Arg Tyr Gly Arg Thr Ala Leu
275          280          285
Ile Leu Ala Val Cys Cys Gly Ser Ala Ser Ile Val Ser Pro Leu Leu

```

290	295	300
Glu Gln Asn Val Asp Val Ser Ser Gln Asp Leu Glu Arg Arg Pro Glu		
305	310	315
Ser Met Leu Phe Leu Val Ile Ile Met		
325		320

```
<210> 377
<211> 148
<212> PRT
<213> Homo sapien
```

```
<220>  
<221> VARIANT  
<222> {1}...{148}  
<223> Xaa = Any Amino Acid
```

[illegible]

```
<210> 378
<211> 1719
<212> PRT
<213> Homo sapien
```

			<400>	378											
Met	Val	Val	Glu	Val	Asp	Ser	Met	Pro	Ala	Ala	Ser	Ser	Val	Lys	Lys
1				5					10					15	
Pro	Phe	Gly	Leu	Arg	Ser	Lys	Met	Gly	Lys	Trp	Cys	Cys	Arg	Cys	Phe
			20					25					30		
Pro	Cys	Cys	Arg	Glu	Ser	Gly	Lys	Ser	Asn	Val	Gly	Thr	Ser	Gly	Asp
			35				40					45			
His	Asp	Asp	Ser	Ala	Met	Lys	Thr	Leu	Arg	Ser	Lys	Met	Gly	Lys	Trp
	50					55					60				
Cys	Arg	His	Cys	Phe	Pro	Cys	Cys	Arg	Gly	Ser	Gly	Lys	Ser	Asn	Val
65					70					75					80
Gly	Ala	Ser	Gly	Asp	His	Asp	Asp	Ser	Ala	Met	Lys	Thr	Leu	Arg	Asn

				85					90				95		
Lys	Met	Gly	Lys	Trp	Cys	Cys	His	Cys	Phe	Pro	Cys	Cys	Arg	Gly	Ser
			100					105					110		
Gly	Lys	Ser	Lys	Val	Gly	Ala	Trp	Gly	Asp	Tyr	Asp	Asp	Ser	Ala	Phe
		115					120					125			
Met	Glu	Pro	Arg	Tyr	His	Val	Arg	Gly	Glu	Asp	Leu	Asp	Lys	Leu	His
	130					135					140				
Arg	Ala	Ala	Trp	Trp	Gly	Lys	Val	Pro	Arg	Lys	Asp	Leu	Ile	Val	Met
145				150						155					160
Leu	Arg	Asp	Thr	Asp	Val	Asn	Lys	Lys	Asp	Lys	Gln	Lys	Arg	Thr	Ala
			165					170					175		
Leu	His	Leu	Ala	Ser	Ala	Asn	Gly	Asn	Ser	Glu	Val	Val	Lys	Leu	Leu
		180					185						190		
Leu	Asp	Arg	Arg	Cys	Gln	Leu	Asn	Val	Leu	Asp	Asn	Lys	Lys	Arg	Thr
	195					200						205			
Ala	Leu	Ile	Lys	Ala	Val	Gln	Cys	Gln	Glu	Asp	Glu	Cys	Ala	Leu	Met
210					215						220				
Leu	Leu	Glu	His	Gly	Thr	Asp	Pro	Asn	Ile	Pro	Asp	Glu	Tyr	Gly	Asn
225				230					235						240
Thr	Thr	Leu	His	Tyr	Ala	Ile	Tyr	Asn	Glu	Asp	Lys	Leu	Met	Ala	Lys
			245					250					255		
Ala	Leu	Leu	Leu	Tyr	Gly	Ala	Asp	Ile	Glu	Ser	Lys	Asn	Lys	His	Gly
		260					265						270		
Leu	Thr	Pro	Leu	Leu	Leu	Gly	Val	His	Glu	Gln	Lys	Gln	Gln	Val	Val
	275					280						285			
Lys	Phe	Leu	Phe	Lys	Lys	Lys	Ala	Asn	Leu	Asn	Ala	Leu	Asp	Arg	Tyr
	290					295					300				
Gly	Arg	Thr	Ala	Leu	Ile	Leu	Ala	Val	Cys	Cys	Gly	Ser	Ala	Ser	Ile
305				310					315						320
Val	Ser	Leu	Leu	Leu	Glu	Gln	Asn	Ile	Asp	Val	Ser	Ser	Gln	Asp	Leu
			325					330					335		
Ser	Gly	Gln	Thr	Ala	Arg	Glu	Tyr	Ala	Val	Ser	Ser	His	His	His	Val
		340				345							350		
Ile	Cys	Gln	Leu	Leu	Ser	Asp	Tyr	Lys	Glu	Lys	Gln	Met	Leu	Lys	Ile
	355					360						365			
Ser	Ser	Glu	Asn	Ser	Asn	Pro	Glu	Asn	Val	Ser	Arg	Thr	Arg	Asn	Lys
	370				375						380				
Pro	Arg	Thr	His	Met	Val	Val	Glu	Val	Asp	Ser	Met	Pro	Ala	Ala	Ser
385				390						395					400
Ser	Val	Lys	Lys	Pro	Phe	Gly	Leu	Arg	Ser	Lys	Met	Gly	Lys	Trp	Cys
			405					410					415		
Cys	Arg	Cys	Phe	Pro	Cys	Cys	Arg	Glu	Ser	Gly	Lys	Ser	Asn	Val	Gly
		420					425						430		
Thr	Ser	Gly	Asp	His	Asp	Asp	Ser	Ala	Met	Lys	Thr	Leu	Arg	Ser	Lys
	435					440						445			
Met	Gly	Lys	Trp	Cys	Arg	His	Cys	Phe	Pro	Cys	Cys	Arg	Gly	Ser	Gly
450				455						460					
Lys	Ser	Asn	Val	Gly	Ala	Ser	Gly	Asp	His	Asp	Asp	Ser	Ala	Met	Lys
465				470						475					480
Thr	Leu	Arg	Asn	Lys	Met	Gly	Lys	Trp	Cys	Cys	His	Cys	Phe	Pro	Cys
			485					490					495		
Cys	Arg	Gly	Ser	Gly	Lys	Ser	Lys	Val	Gly	Ala	Trp	Gly	Asp	Tyr	Asp
		500					505						510		
Asp	Ser	Ala	Phe	Met	Glu	Pro	Arg	Tyr	His	Val	Arg	Gly	Glu	Asp	Leu
	515						520						525		

Asp Lys Leu His Arg Ala Ala Trp Trp Gly Lys Val Pro Arg Lys Asp
 530 535 540
 Leu Ile Val Met Leu Arg Asp Thr Asp Val Asn Lys Lys Asp Lys Gln
 545 550 555 560
 Lys Arg Thr Ala Leu His Leu Ala Ser Ala Asn Gly Asn Ser Glu Val
 565 570 575
 Val Lys Leu Leu Leu Asp Arg Arg Cys Gln Leu Asn Val Leu Asp Asn
 580 585 590
 Lys Lys Arg Thr Ala Leu Ile Lys Ala Val Gln Cys Gln Glu Asp Glu
 595 600 605
 Cys Ala Leu Met Leu Leu Glu His Gly Thr Asp Pro Asn Ile Pro Asp
 610 615 620
 Glu Tyr Gly Asn Thr Thr Leu His Tyr Ala Ile Tyr Asn Glu Asp Lys
 625 630 635 640
 Leu Met Ala Lys Ala Leu Leu Leu Tyr Gly Ala Asp Ile Glu Ser Lys
 645 650 655
 Asn Lys His Gly Leu Thr Pro Leu Leu Leu Gly Val His Glu Gln Lys
 660 665 670
 Gln Gln Val Val Lys Phe Leu Ile Lys Lys Lys Ala Asn Leu Asn Ala
 675 680 685
 Leu Asp Arg Tyr Gly Arg Thr Ala Leu Ile Leu Ala Val Cys Cys Gly
 690 695 700
 Ser Ala Ser Ile Val Ser Leu Leu Leu Glu Gln Asn Ile Asp Val Ser
 705 710 715 720
 Ser Gln Asp Leu Ser Gly Gln Thr Ala Arg Glu Tyr Ala Val Ser Ser
 725 730 735
 His His His Val Ile Cys Gln Leu Leu Ser Asp Tyr Lys Glu Lys Gln
 740 745 750
 Met Leu Lys Ile Ser Ser Glu Asn Ser Asn Pro Gln Gln Asp Leu Lys
 755 760 765
 Leu Thr Ser Glu Glu Glu Ser Gln Arg Phe Lys Gly Ser Glu Asn Ser
 770 775 780
 Gln Pro Glu Lys Met Ser Gln Glu Pro Glu Ile Asn Lys Asp Gly Asp
 785 790 795 800
 Arg Glu Val Glu Glu Glu Met Lys Lys His Glu Ser Asn Asn Val Gly
 805 810 815
 Leu Leu Glu Asn Leu Thr Asn Gly Val Thr Ala Gly Asn Gly Asp Asn
 820 825 830
 Gly Leu Ile Pro Gln Arg Lys Ser Arg Thr Pro Glu Asn Gln Gln Phe
 835 840 845
 Pro Asp Asn Glu Ser Glu Glu Tyr His Arg Ile Cys Glu Leu Val Ser
 850 855 860
 Asp Tyr Lys Glu Lys Gln Met Pro Lys Tyr Ser Ser Glu Asn Ser Asn
 865 870 875 880
 Pro Glu Gln Asp Leu Lys Leu Thr Ser Glu Glu Glu Ser Gln Arg Leu
 885 890 895
 Glu Gly Ser Glu Asn Gly Gln Pro Glu Leu Glu Asn Phe Met Ala Ile
 900 905 910
 Glu Glu Met Lys Lys His Gly Ser Thr His Val Gly Phe Pro Glu Asn
 915 920 925
 Leu Thr Asn Gly Ala Thr Ala Gly Asn Gly Asp Asp Gly Leu Ile Pro
 930 935 940
 Pro Arg Lys Ser Arg Thr Pro Glu Ser Gln Gln Phe Pro Asp Thr Glu
 945 950 955 960
 Asn Glu Glu Tyr His Ser Asp Glu Gln Asn Asp Thr Gln Lys Gln Phe

	965		970		975
Cys Glu Glu Gln Asn Thr Gly Ile Leu His Asp Glu Ile Leu Ile His					
	980		985		990
Glu Glu Lys Gln Ile Glu Val Val Glu Lys Met Asn Ser Glu Ile Ser					
	995		1000		1005
Leu Ser Cys Lys Lys Glu Lys Asp Ile Leu His Glu Asn Ser Thr Leu					
	1010		1015		1020
Arg Glu Glu Ile Ala Met Leu Arg Leu Glu Ile Asp Thr Met Lys His					
	1025		1030		1035
Gln Ser Gln Leu Pro Arg Thr His Met Val Val Glu Val Asp Ser Met					
	1045		1050		1055
Pro Ala Ala Ser Ser Val Lys Lys Pro Phe Gly Leu Arg Ser Lys Met					
	1060		1065		1070
Gly Lys Trp Cys Cys Arg Cys Phe Pro Cys Cys Arg Glu Ser Gly Lys					
	1075		1080		1085
Ser Asn Val Gly Thr Ser Gly Asp His Asp Asp Ser Ala Met Lys Thr					
	1090		1095		1100
Leu Arg Ser Lys Met Gly Lys Trp Cys Arg His Cys Phe Pro Cys Cys					
	1105		1110		1115
Arg Gly Ser Gly Lys Ser Asn Val Gly Ala Ser Gly Asp His Asp Asp					
	1125		1130		1135
Ser Ala Met Lys Thr Leu Arg Asn Lys Met Gly Lys Trp Cys Cys His					
	1140		1145		1150
Cys Phe Pro Cys Cys Arg Gly Ser Gly Lys Ser Lys Val Gly Ala Trp					
	1155		1160		1165
Gly Asp Tyr Asp Asp Ser Ala Phe Met Glu Pro Arg Tyr His Val Arg					
	1170		1175		1180
Gly Glu Asp Leu Asp Lys Leu His Arg Ala Ala Trp Trp Gly Lys Val					
	1185		1190		1195
Pro Arg Lys Asp Leu Ile Val Met Leu Arg Asp Thr Asp Val Asn Lys					
	1205		1210		1215
Lys Asp Lys Gln Lys Arg Thr Ala Leu His Leu Ala Ser Ala Asn Gly					
	1220		1225		1230
Asn Ser Glu Val Val Lys Leu Leu Leu Asp Arg Arg Cys Gln Leu Asn					
	1235		1240		1245
Val Leu Asp Asn Lys Lys Arg Thr Ala Leu Ile Lys Ala Val Gln Cys					
	1250		1255		1260
Gln Glu Asp Glu Cys Ala Leu Met Leu Leu Glu His Gly Thr Asp Pro					
	1265		1270		1275
Asn Ile Pro Asp Glu Tyr Gly Asn Thr Thr Leu His Tyr Ala Ile Tyr					
	1285		1290		1295
Asn Glu Asp Lys Leu Met Ala Lys Ala Leu Leu Leu Tyr Gly Ala Asp					
	1300		1305		1310
Ile Glu Ser Lys Asn Lys His Gly Leu Thr Pro Leu Leu Leu Gly Val					
	1315		1320		1325
His Glu Gln Lys Gln Gln Val Val Lys Phe Leu Ile Lys Lys Lys Ala					
	1330		1335		1340
Asn Leu Asn Ala Leu Asp Arg Tyr Gly Arg Thr Ala Leu Ile Leu Ala					
	1345		1350		1355
Val Cys Cys Gly Ser Ala Ser Ile Val Ser Leu Leu Leu Glu Gln Asn					
	1365		1370		1375
Ile Asp Val Ser Ser Gln Asp Leu Ser Gly Gln Thr Ala Arg Glu Tyr					
	1380		1385		1390
Ala Val Ser Ser His His His Val Ile Cys Gln Leu Leu Ser Asp Tyr					
	1395		1400		1405

Lys Glu Lys Gln Met Leu Lys Ile Ser Ser Glu Asn Ser Asn Pro Glu
 1410 1415 1420
 Gln Asp Leu Lys Leu Thr Ser Glu Glu Glu Ser Gln Arg Phe Lys Gly
 1425 1430 1435 144
 Ser Glu Asn Ser Gln Pro Glu Lys Met Ser Gln Glu Pro Glu Ile Asn
 1445 1450 1455
 Lys Asp Gly Asp Arg Glu Val Glu Glu Glu Met Lys Lys His Glu Ser
 1460 1465 1470
 Asn Asn Val Gly Leu Leu Glu Asn Leu Thr Asn Gly Val Thr Ala Gly
 1475 1480 1485
 Asn Gly Asp Asn Gly Leu Ile Pro Gln Arg Lys Ser Arg Thr Pro Glu
 1490 1495 1500
 Asn Gln Gln Phe Pro Asp Asn Glu Ser Glu Glu Tyr His Arg Ile Cys
 1505 1510 1515 152
 Glu Leu Val Ser Asp Tyr Lys Glu Lys Gln Met Pro Lys Tyr Ser Ser
 1525 1530 1535
 Glu Asn Ser Asn Pro Glu Gln Asp Leu Lys Leu Thr Ser Glu Glu Glu
 1540 1545 1550
 Ser Gln Arg Leu Glu Gly Ser Glu Asn Gly Gln Pro Glu Lys Arg Ser
 1555 1560 1565
 Gln Glu Pro Glu Ile Asn Lys Asp Gly Asp Arg Glu Leu Glu Asn Phe
 1570 1575 1580
 Met Ala Ile Glu Glu Met Lys Lys His Gly Ser Thr His Val Gly Phe
 1585 1590 1595 160
 Pro Glu Asn Leu Thr Asn Gly Ala Thr Ala Gly Asn Gly Asp Asp Gly
 1605 1610 1615
 Leu Ile Pro Pro Arg Lys Ser Arg Thr Pro Glu Ser Gln Gln Phe Pro
 1620 1625 1630
 Asp Thr Glu Asn Glu Glu Tyr His Ser Asp Glu Gln Asn Asp Thr Gln
 1635 1640 1645
 Lys Gln Phe Cys Glu Glu Gln Asn Thr Gly Ile Leu His Asp Glu Ile
 1650 1655 1660
 Leu Ile His Glu Glu Lys Gln Ile Glu Val Val Glu Lys Met Asn Ser
 1665 1670 1675 168
 Glu Leu Ser Leu Ser Cys Lys Lys Glu Lys Asp Ile Leu His Glu Asn
 1685 1690 1695
 Ser Thr Leu Arg Glu Glu Ile Ala Met Leu Arg Leu Glu Leu Asp Thr
 1700 1705 1710
 Met Lys His Gln Ser Gln Leu
 1715

<210> 379

<211> 656

<212> PRT

<213> Homo sapien

<400> 379

Met Val Val Glu Val Asp Ser Met Pro Ala Ala Ser Ser Val Lys Lys
 1 5 10 15
 Pro Phe Gly Leu Arg Ser Lys Met Gly Lys Trp Cys Cys Arg Cys Phe
 20 25 30
 Pro Cys Cys Arg Glu Ser Gly Lys Ser Asn Val Gly Thr Ser Gly Asp
 35 40 45
 His Asp Asp Ser Ala Met Lys Thr Leu Arg Ser Lys Met Gly Lys Trp
 50 55 60

Cys Arg His Lys Phe Pro Cys Cys Arg Gly Ser Gly Lys Ser Asn Val
 65 70 75 80
 Gly Ala Ser Gly Asp His Asp Asp Ser Ala Met Lys Thr Leu Arg Asn
 85 90 95
 Lys Met Gly Lys Trp Cys Cys His Cys Phe Pro Cys Cys Arg Gly Ser
 100 105 110
 Gly Lys Ser Lys Val Gly Ala Trp Gly Asp Tyr Asp Asp Ser Ala Phe
 115 120 125
 Met Glu Pro Arg Tyr His Val Arg Gly Glu Asp Leu Asp Lys Leu His
 130 135 140
 Arg Ala Ala Trp Trp Gly Lys Val Pro Arg Lys Asp Leu Ile Val Met
 145 150 155 160
 Leu Arg Asp Thr Asp Val Asn Lys Lys Asp Lys Gln Lys Arg Thr Ala
 165 170 175
 Leu His Leu Ala Ser Ala Asn Gly Asn Ser Glu Val Val Lys Leu Leu
 180 185 190
 Leu Asp Arg Arg Cys Gln Leu Asn Val Leu Asp Asn Lys Lys Arg Thr
 195 200 205
 Ala Leu Ile Lys Ala Val Gln Cys Gln Glu Asp Glu Cys Ala Leu Met
 210 215 220
 Leu Leu Glu His Gly Thr Asp Pro Asn Ile Pro Asp Glu Tyr Gly Asn
 225 230 235 240
 Thr Thr Leu His Tyr Ala Ile Tyr Asn Glu Asp Lys Leu Met Ala Lys
 245 250 255
 Ala Leu Leu Leu Tyr Gly Ala Asp Ile Glu Ser Lys Asn Lys His Gly
 260 265 270
 Leu Thr Pro Leu Leu Leu Gly Val His Glu Gln Lys Gln Gln Val Val
 275 280 285
 Lys Phe Leu Ile Lys Lys Lys Ala Asn Leu Asn Ala Leu Asp Arg Tyr
 290 295 300
 Gly Arg Thr Ala Leu Ile Leu Ala Val Cys Cys Gly Ser Ala Ser Ile
 305 310 315 320
 Val Ser Leu Leu Leu Glu Gln Asn Ile Asp Val Ser Ser Gln Asp Leu
 325 330 335
 Ser Gly Gln Thr Ala Arg Glu Tyr Ala Val Ser Ser His His His Val
 340 345 350
 Ile Cys Gln Leu Leu Ser Asp Tyr Lys Glu Lys Gln Met Leu Lys Ile
 355 360 365
 Ser Ser Glu Asn Ser Asn Pro Glu Gln Asp Leu Lys Leu Thr Ser Glu
 370 375 380
 Glu Glu Ser Gln Arg Phe Lys Gly Ser Glu Asn Ser Gln Pro Glu Lys
 385 390 395 400
 Met Ser Gln Glu Pro Glu Ile Asn Lys Asp Gly Asp Arg Glu Val Glu
 405 410 415
 Glu Glu Met Lys Lys His Glu Ser Asn Asn Val Gly Leu Leu Glu Asn
 420 425 430
 Leu Thr Asn Gly Val Thr Ala Gly Asn Gly Asp Asn Gly Leu Ile Pro
 435 440 445
 Gln Arg Lys Ser Arg Thr Pro Glu Asn Gln Gln Phe Pro Asp Asn Glu
 450 455 460
 Ser Glu Glu Tyr His Arg Ile Cys Glu Leu Val Ser Asp Tyr Lys Glu
 465 470 475 480
 Lys Gln Met Pro Lys Tyr Ser Ser Glu Asn Ser Asn Pro Glu Gln Asp
 485 490 495
 Leu Lys Leu Thr Ser Glu Glu Glu Ser Gln Arg Leu Glu Gly Ser Glu

500	505	510
Asn Gly Glu Pro Glu Leu Glu	Asn Phe Met Ala Ile Glu	Glu Met Lys
515	520	525
Lys His Gly Ser Thr His Val	Gly Phe Pro Glu Asn Leu	Thr Asn Gly
530	535	540
Ala Thr Ala Gly Asn Gly Asp	Asp Gly Leu Ile Pro Pro	Arg Lys Ser
545	550	555
Arg Thr Pro Glu Ser Gln Gln	Phe Pro Asp Thr Glu Asn	Glu Glu Tyr
565	570	575
His Ser Asp Glu Gln Asn Asp	Thr Gln Lys Gln Phe Cys	Glu Glu Gln
580	585	590
Asn Thr Gly Ile Leu His Asp	Glu Ile Leu Ile His Glu	Glu Lys Gln
595	600	605
Ile Glu Val Val Glu Lys Met	Asn Ser Glu Leu Ser Leu	Ser Cys Lys
610	615	620
Lys Glu Lys Asp Ile Leu His	Glu Asn Ser Thr Leu Arg	Glu Glu Ile
625	630	635
Ala Met Leu Arg Leu Glu Leu	Asp Thr Met Lys His Gln	Ser Gln Leu
645	650	655

<210> 380
 <211> 671
 <212> PRT
 <213> Homo sapien

<400> 380

Met Val Val Glu Val Asp Ser Met	Pro Ala Ala Ser Ser Val Lys Lys
1	5 10 15
Pro Phe Gly Leu Arg Ser Lys Met	Gly Lys Trp Cys Cys Arg Cys Phe
20	25 30
Pro Cys Cys Arg Glu Ser Gly Lys	Ser Asn Val Gly Thr Ser Gly Asp
35	40 45
His Asp Asp Ser Ala Met Lys Thr	Leu Arg Ser Lys Met Gly Lys Trp
50	55 60
Cys Arg His Cys Phe Pro Cys Cys	Arg Gly Ser Gly Lys Ser Asn Val
65	70 75 80
Gly Ala Ser Gly Asp His Asp Asp	Ser Ala Met Lys Thr Leu Arg Asn
85	90 95
Lys Met Gly Lys Trp Cys Cys His	Cys Phe Pro Cys Cys Arg Gly Ser
100	105 110
Gly Lys Ser Lys Val Gly Ala Trp	Gly Asp Tyr Asp Asp Ser Ala Phe
115	120 125
Met Glu Pro Arg Tyr His Val Arg	Gly Glu Asp Leu Asp Lys Leu His
130	135 140
Arg Ala Ala Trp Trp Gly Lys Val	Pro Arg Lys Asp Leu Ile Val Met
145	150 155 160
Leu Arg Asp Thr Asp Val Asn Lys	Lys Asp Lys Gln Lys Arg Thr Ala
165	170 175
Leu His Leu Ala Ser Ala Asn Gly	Asn Ser Glu Val Val Lys Leu Leu
180	185 190
Leu Asp Arg Arg Cys Gln Leu Asn	Val Leu Asp Asn Lys Lys Arg Thr
195	200 205
Ala Leu Ile Lys Ala Val Gln Cys	Gln Glu Asp Glu Lys Ala Leu Met
210	215 220
Leu Leu Glu His Gly Thr Asp	Pro Asn Ile Pro Asp Glu Tyr Gly Asn

[illegible]

<210> 381
 <211> 251
 <212> DNA
 <213> Homo sapien

<400> 381

ggagagagcgt ctgctggggc aggaaggggt ttccctgcc	tctcactctgt cctcaccac	60
ggtaacatgc ttccctcag ggtatccca cccaggggc	tcccatgac ctclpagggg	120
cccatatccc agyagaagca ttggggaglt gggggcaggt	gaaggaccca ggaactcacc	180
atcttggggc tccaaggcag agggaggggt cctcaagaa	gtcgggagga aaatcugta	240
caagcagtcg g		251

<210> 382
 <211> 3279
 <212> DNA
 <213> Homo sapien

<400> 382

cttccctgcag ccccatgct ggtgaggggc acgggcagga	acagtggacc caacatggaa	60
atgctgtagg gtgtcaggaa gtgatcgggc tctggggcag	ggaggagggg tggggagtgt	120
cactgggagg ggacatcctg cagaaggtag gagtggacaa	accccgcctg caggggaggg	180
gagagccctg cggcaccctg gggagccagag gtagcagrac	ctgccagggc ctgggagggag	240
gggcttggag ggcgtgagga ytagcgaggg gctgcatgg	ctggagttag ggcacagggg	300
cagggcggca gattggcctc caccgggagag agagggcccc	tccctgcaggg cctcactctg	360
gcccacggag gacactgctt ttctctgag gagttagga	ctgttgatgg tgcctggacc	420
aagaaggana gggcctggct caggtgtcca gaggctgtcg	ctggcttccc ttgggatcca	480
gactgaggg agggagggcg gcaggagctt gggggagtg	acggttagga tgacctgggg	540
gtggctccag gcttggccu tgcctggggc ctcccccag	ctccctcaca gctcctggc	600
cctcagttct tccctccac tccctccctc atctggcctc	agtgggtcat tctgatcact	660
gaactgacca taccagggc tgcctcaggc cttccctggg	tcccacatgc cctggaggag	720
ggagctctag tcagagagta gtctggagga ygtggcctct	gcgatgtacc tgtggggggc	780
gcactctgca gatggctccc gccctcctcc tgcctgacctg	tctgcaggga ctgtcctcct	840
ggacacttgc ccttctgag gactcggacc ctgaagctcc	ctccctatag gccagagactg	900
gagccttgtt cctctgctg gactcctctg ccatactctt	gtgggagtggt gttctggaga	960
catctctgtc tgttctgag agctgggaat tgcctcagt	catctgctg cggggtctg	1020
agagatggag ttgctaggc agttattggg gccatctctt	ctcactgtgt ctccctcct	1080
ttacctttag ggtgattctg ggggtccact tctctgtaat	gggtgctctc aggtatcac	1140
atcatggggc cctgagccat ytgccctgcc tgaagagcct	gctgtgtaca ccaaggttgt	1200
gcattcccgg agtgagaca aggaccccat cggcggcaac	ccttgagtyc cctgtccc	1260
cccctacctc tagtaaatc agtccacct cacttctctg	catcacttgg ccttctctga	1320
tgttggacac ctgaagcttg gaactcactt ggcggagct	cgagcctcct gagtctact	1380
gacctgtgt ttctggctgt gagtccaggg ctgctaggaa	agggaatggg caggacacag	1440
tgtatgcca tgtttctgaa elagggtataa ttctgtcctc	tccctcggaa cactggctgt	1500
ctctgaagac ttctcgtca gtttctagtga ggaacacac	aaagacgtgg gtgacctgt	1560
tgtttgtggg gtgcagagat gggaggggtg gggccracc	tggaagagtg gacagtga	1620
caagggtggc actctetaca gatcactgag gataagctgg	agccacactg catgaggcac	1680
acacacagca aggttgagcg tgaacacata gccacagctg	tccctggggg actgggaagc	1740
ctagataggg cctgagcag aagagagggg aggatcctcc	tatgttgttg aaggagggac	1800
tagggggaga aactgagagc tgattaatc caggaggttt	gttcaggctc cccaaaccac	1860
cgtaagattt gatgatttc tagcaggat taccagaat	agagctate atgctgttgt	1920
ttattatggg ttgttacct gataggalac atactgaat	caggacacaa acagatgt	1980
ttagtttagg tgtggagaa acgggggaaa acttgcaglt	acgaagactg gcaacttggc	2040
tttactaagt ttccagactg gcaggaggtc aaacctatta	gggttagggac cttgtggagt	2100
gtagctgac cagctgaltg aggaactagc cagggtggggg	cctttccctt tggatggggg	2160

```

gcataatccga cagttattct ctccaaagtgg agacttaacgg acagcatata attctccctg 2220
caaggatgta tgaataatag tacaaagtaa ttccaaactga ggaagctcac ctgaccccta 2280
gtgtccagggt tttttactgg ggggtctgtag gacgagtatg gggtaattga ataattgaac 2340
tgaagtcttc agactctagg ttccctagag ttcaaacaga tacagcatgg tccagagttc 2400
cagatgtaca aaaacaggga ttcatcaccu atcccatctt tagcatgaag ggtctggcat 2460
ggcccagggc cccaaagtata tcaaggcart tgggcagaaac atgccaaggc atcaaatgtc 2520
atctcccagg agttattcaa gggctgagccc tttaacttggg atgtacaggc tttagagcag 2580
gcagggtctg caggtcaacc ttttattgta cgggggatga gggaaaggga gaggatgagg 2640
aagcccccct ggggatttgg ttgggtcttg tgatcagggtg gtctatgggg ctatccctac 2700
aagaagaagc ccaaaatag gggcacattg aggaatgata ctgagcccaa agagcattca 2760
atcattgttt tatttgcctt ctctcaccac cattgggtgag ggggggatta ccacnctggg 2820
gttatgaaga tggttgaca cccacacat agcacctggg atatgagtc acaagtttct 2880
tagccataga gattcacagc ccagagcagg aggacgtgac acaccatgca ggtgacatg 2940
ggggatgggc cgggatttgg tgtgaagaag caaggaactgt tagaggcagg ctttatagta 3000
acaagacggg ggggcaact ctggtttccg tgggggaatg ccatggtctt gctttactaa 3060
gttttgagac cggcaggtag tgaactcat taggctgaga accttgtgga atgacgctga 3120
ccagctgat agaggaaagta gccaggttgg agcctttccc agtgggtgtg ggacatctct 3180
ggcaagattt tgtggccttc ctggttacag atactggggc agcaaataaa actgactctt 3240
gttttcagac ctttaaaaaa aaaaataaaa aaaggtttt 3279

```

<210> 383

<211> 155

<212> PRT

<213> Homo sapiens

<400> 383

```

Met Ala Gly Val Arg Asp Gln Gly Gln Gly Ala Arg Trp Pro His Thr
      5                      10                      15

Gly Lys Arg Gly Pro Leu Leu Gln Gly Leu Thr Trp Ala Thr Gly Gly
      20                      25                      30

His Cys Phe Ser Ser Glu Glu Ser Gly Ala Val Asp Gly Ala Gly Gln
      35                      40                      45

Lys Lys Asp Arg Ala Trp Leu Arg Cys Pro Glu Ala Val Ala Gly Phe
      50                      55                      60

Pro Leu Gly Ser Asp Cys Arg Glu Gly Gly Arg Gln Gly Cys Gly Gly
      65                      70                      75                      80

Ser Asp Asp Glu Asp Asp Leu Gly Val Ala Pro Gly Leu Ala Pro Ala
      85                      90                      95

Trp Ala Leu Thr Gln Pro Pro Ser Gln Ser Pro Gly Pro Gln Ser Leu
      100                     105                     110

Pro Ser Thr Pro Ser Ser Ile Trp Pro Gln Trp Val Ile Leu Ile Thr
      115                     120                     125

Glu Leu Thr Ile Pro Ser Pro Ala His Gly Pro Pro Trp Leu Pro Asn
      130                     135                     140

Ala Leu Glu Arg Gly His Leu Val Arg Glu
      145                     150

```

<210> 384
 <211> 557
 <212> DNA
 <213> Homo sapiens

<400> 384
 ggatcctctt yagcgggcgc ctantactac taaattcgcg gccgcgtcga cgaagaagag 60
 aaagatgtgt ttgtgttttg autctctgtg gtcccttcca atgctgtggg ttcccaacca 120
 ggggaagggt ccctttttgca ttgcgaagtg ccataaccat gaggactact ctaccatggg 180
 tctgcctcct ggccaaagcay gctggttttg aagaatgaa tgantgattc taccagctagg 240
 actcaaccct gaantggaaa gtcttgcact cccatcttgc ggatccgctt gtgcacatgc 300
 ctctgtagag agcagcatcc ccagggaact tggaaacagt tggcactgta aggtgcttgc 360
 tccccaaagg acatcctaaa aggtgttgta atggtgaaaa cgtcttccct ctttattgcc 420
 cctctctatt tatgtgaaca actgtttgtc tttttttgta ttttttttaa actgttaagt 480
 tcaacttgta aatggaatat catgcaata aattatgoga ttttttttcc aagtaaaaa 540
 aaaaaa
 557

<210> 385
 <211> 337
 <212> DNA
 <213> Homo sapiens

<400> 385
 ttcccaggat atgtggcagg gaagacacat tcaatctcct tgatggggct gattccttta 60
 gttctcttag cagcagatgg gctaggagga agtgaccaca gtggttgact ctatgtgca 120
 tctcaaggcc atctgtgtgc ttcgagtacg gacacatcat cactcctgca ttgttgatca 180
 aaacgtggag gtgcttttcc tccagctaga agcccttagc aaaaagtcca atagacttca 240
 tatcagacag gtccagtttc cgcaccaaca cctgctgggt cctgtcgtg gtctggatct 300
 attcggccac caattccccc ttttccacat ccggca
 337

<210> 386
 <211> 300
 <212> DNA
 <213> Homo sapiens

<400> 386
 gggcccgcta ccggccragg ccccgcccty cgagtccctc tcccgggaty cctgcccga 60
 gcccgctcgg cccaaaggtt gggcgcgggg ctgctctac cggctggcgg ctgtaactca 120
 gcgaaccttg ccgaaggct ctagcaaggc cccaccgacc ccagccggcg cggcgggcggc 180
 gcggactttg cccggtgtgt gggcgggagc ggactgcgtg tccgcgagc ggcaycgaag 240
 atgttagcct tcgctgncag gaccgtggac cgatcccagg gctgtggtgt aacctcagcc 300

<210> 387
 <211> 537
 <212> DNA
 <213> Homo sapiens

<400> 387
 gggccgaagt gggcaccag ggactctttt caggtctcct tctcgggato atcaaggctg 60
 cccctctctg tgcctatctg atcagcact atgagtccg ccaaaagctt tccagaggc 120
 tgaacaaagg ccggtctctg ggcggctgaa aggggcaagg aggcaggac cccgtctctc 180
 ccacggatgg ggaagaggac ggaggagacc cagccaaagt ccttttctc agcactgagg 240
 gagggggctt gtctccttc cctccggcg acaagctcca gggcagggrl gtccctctgg 300


```

gaggccacgc aattctctcag acacaacttc ttcctgctgc tccagtcgtg gggatcaton 360
cttaccacac ccccaagttc aagaccacat ctccagctg ccccttctgt gtttccctgt 420
gtttgtgtga gctgggcats tctccaggaa ccaagaaacc ctacgctgg tgtagtctcc 480
ctgaccttg ttaattctt aagttctaac atgatgaact tcaaaaaaaa aaaaaaa 537

```

<210> 388

<211> 520

<212> DNA

<213> Homo sapiens

<400> 388

```

aggataattt ttaaaccaat caaatgaaa aaacaacaa aaasaaagg aatgtcatg 60
tgaggtaaa ccagtttgc ttccctaata gtggaaaaag taaggaggact actcagcact 120
gtttgaagat tgcctctct acagcttctg agaatttgtt tatttcaett gcccaagtga 180
ggacuccctc uccaacatgc ccagccca ccttaaggat ggtcccttgc caccagggaa 240
ccaggaaact gctacttgt gacctcaca gagaccagga gggtttgtt agctcacagg 300
acttccccc ccccaagaag tttagcatcc atactagact cactactaac tcaactaggc 360
tctactcaa ttgatggta tttagcaatt ccatttttt ttgggttctt caaacagaaa 420
atctttctc ttctcattac cagtaaaggc tcttggctat tttctgttg aatgattct 480
atgaacttgt cttattttaa tgggtgggtt tttttctgt 520

```

<210> 389

<211> 365

<212> DNA

<213> Homo sapiens

<400> 389

```

cgttgcccca gtttgacaga aggaaggcg gagcttattt aaagtctaga gggagtgga 60
gagtttaaggc tggatttcag atctgctcgt ttccagccgc agtctgccc ctgctcccc 120
aargactttc caaatatat cccagcgcc ttccagctca ggcgtctag aagcgtcttg 180
aagcctatgg ccagctgtct ttgtgttccc tctcaccgc ctgtcctca agctgagact 240
cccaggaaac ctccagacta ccttctctg ccttcagcaa ggggcttgc ccacattctc 300
tgagggtcag tggagaacc tagactccc ttgctagagg tagaaaggg aggggtgctg 360
gggag 365

```

<210> 390

<211> 221

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> [1]... (221)

<223> n = A, T, C or G

<400> 390

```

tgctctcca tctgggccc gaattctctg tcaggaaagt ggggactggc cccatctgca 60
tacacggntt ctcatgggtg tggacatct ctgtctggg ttccaggag gcctctggct 120
gctctcngag tctcngnga nctgttccc cantctgac aaaggaaagg cggagcttat 180
tcaaagctca gaggagtgga aggaattag gctggatttc a 221

```

<210> 391

<211> 325

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)...(325)

<223> n = A,T,C or G

<400> 391

```

tggagcaggt cccgaggcct cccatagagcc tggggcccgac cctgtgncgc tgcangcttt 60
ctctcgcgcc cagcctggag ctgctccctgg catctaccaa caatcagncg aggcgagcag 120
tagccagggc actgctgcgc acagccagtc cnnataccat catgtacccc ggtgngctct 180
ncauttugat ntcnagacc ctaccacatn tagttctgct ctcccaccgg ntaccagccc 240
cactgccacg gaatcctaca gccagtaccc tgtcccgacg tctctacctc ccagtacgat 300
gggacctccg gctactacta tgacc

```

325

<210> 392

<211> 277

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)...(277)

<223> n = A,T,C or G

<400> 392

```

atallgctta actccttctt ttatatcttt caacattttc atgagagaaug gttcacctct 60
agctctactt nggcagagga ctctactctg agtctcttcc ccggcctgno ccagtngnaa 120
antaccangc accgncatgn cttaanaacn noctggtttn tgggttnttc aatgargcra 180
tgcagtgcac caccctgtcc actacgtgat gctgtaggat taaagtctca cagtgggcgg 240
ctgaggatcc agcgcctgct cctgtgttgc tggggaa

```

277

<210> 393

<211> 566

<212> DNA

<213> Homo sapiens

<400> 393

```

actagtccag tgtggtggaa ttgcgggccc cgtcgacgga caggtcagct gtctggctca 60
gtgatctacn ttctgaagtt gtctgaaaat gtcttcacga ttcaattcag cctaaacgtt 120
ttgcggggaa cactgcagag acaatgctgt gactttccaa ccttagcccc tctgcgggca 180
gaggaaggtct agtttgtcca ttagcattat catgatctca ggaactggtta cttagttaag 240
gaggggtctc gagagatctgt cctctttaga gaacacctac ttataatgaa gtatttggga 300
gggttggttt caaaagtaga aatgtcctgt attccgatga tcatcctgta aacattttat 360
catttatctc tcatccctgc ctgtgtctat tatttatatt abatctctac gctggaaact 420
ttctgectca atgtttacty tgcctttgth ttgactagtt tgtgttgttg aaaaaaaa 480
catctctctg ctgagcttta atttttgtcc aaagttattt taatctatac aattaaagc 540
tttgcctat caaaaaaaan aaaaaa

```

566

<210> 394

<211> 384

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)... (384)
 <223> n = A,T,C or G

<400> 394
 gaacatacat gtcgccggcac ctgagctgca gtctgacatu atcgccatca cgggcctcgc 60
 tgcuaattng gaccggggcna aggcctggat gctggagcgt gtggaaggac tacaggccna 120
 gcaggaggac cgggctttta ggagttttta gctgagtgto actgtagacc ccaatacca 180
 tcccaagatt atcgggagaa agggggcagt aattaccraa atccggttgg agcatgacgt 240
 gaacatccag tttcctgata aggacgatgg gaaacagccc caggaccana ttaacntcac 300
 aggggtacga aagaacacag aagctgcuaa ggatgctata ctgagaattg tgggtgaact 360
 cgagcagatg gtttctgagg acgt 384

<210> 395
 <211> 399
 <212> DNA
 <213> Homo sapiens

<400> 395
 ggcaaaactg tgtgacctca atagacctc gcagatccaa ggtcaagtat cagaagtgac 60
 tctgaccttg gaotccaaga cctacatcaa cagcctggct atattagatg atgagccagt 120
 tatcagaggt ttcatcattg cygaatttgt ggagtcbaa gaaatcatgg cctctgaagt 180
 attcaggtct ttcagttacc ctgagttctc tatagagttg cctaacacay gcagaattgg 240
 ccagctactt gtctgcaatc gtatcttcaa gaatacctg gcaatccctt tgactgacgt 300
 caagtctctc tgggaagacc tgggcattct ctaatacag acctctgacc atgggacggg 360
 agagcctggt gagaccatcc aatcccaat acaatgcac 395

<210> 396
 <211> 403
 <212> DNA
 <213> Homo sapiens

<220>
 <221> misc_feature
 <222> (1)... (403)
 <223> n = A,T,C or G

<400> 396
 tggagttntc agtgraaaca agccataaag cttcagtagc aaattactgt ctcaacagaa 60
 gacattttca acttttgtct cagctgctga taaaacaaat catgtgttta gottgactcc 120
 agacaaggac aacctgttcc ttcataaactc tctagagaaa aaaggaggt gtttagtagat 180
 actaaaaaaa gtyyatgaat aatctggata ttttctctaa aaagattcct tgaaacacat 240
 taggaaaatg gagggcctta tgatcagaat gctagaatta gtccattgtg ctggaagcag 300
 gtttagggga yggagtggg gataaaagaa gyaanaaaag aagagtgaag aaacctattt 360
 atcaagrag gtgctatcac tcaatgttag gccctgctct ttt 403

<210> 397
 <211> 100
 <212> DNA
 <213> Homo sapiens

<220>
 <221> misc_feature
 <222> (1)... (100)
 <223> n = A,T,C or G

<400> 397

actagtncag tgtggtggag ttgcgggcgg cgtgcgccca naanccatct ctctagcaaa 60
 tccatcccg utccgtggtg gtnccagat gactgacaaa 100

<210> 398

<211> 278

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)...(278)

<223> n = A,T,C or G

<400> 398

ggggcccggt cgcagccagt tccgcragcg ctgcgcccty ggtgggggatg tgcgcacgc 60
 ccacctggac atctggaggt cagcgggctg gatgaagag cggccttcac ctggggcgat 120
 tccctactgt gctcgcacca gtgaggagag ctggaccgac agcagaggtg acctatcttg 180
 ctccgggacg cccatccacc tctggcaglt cctcagggag ttgctactca agcccccag 240
 ctatggccgc ttcattangt ggcctcaccg ggagaagg 278

<210> 399

<211> 298

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)...(298)

<223> n = A,T,C or G

<400> 399

acggaggggtg aggaagcgnc cctgggagtc anaggatggg tccctgcatt gaccccccen 60
 ggggtgceng catggagcgc atgggcgcgg gcctgggccc cggcatggat cgcgtgggct 120
 ccgagatcga gcgcattggc ctggtcatgg accgcattgg ctccgtggag cgcattgggc 180
 ccggcattga gcgcattggc ccgtgggccc tgcaccacat ggcctccanc attgancgca 240
 tgggcccagac catggagcgc attggctctg gcgtggagcn catgggtgccc ggcattggg 298

<210> 400

<211> 548

<212> DNA

<213> Homo sapiens

<400> 400

acatcaacta ctctctcatt ttaaggatat gcagttccct tatcccccct ttcttgccct 60
 gtacatgtac atgtatgaaa ttctctctct ttaccgaact ctctccacac atcacaggat 120
 caaagaacca caagcttaga aggttaagag ggcaacctat gaaatgaaat ggtgatttct 180
 tgaatctctt ttctccacgt ttaaggggccc atggcaggac ttgagtttgc gatttaagac 240
 tgcagagggc tagagaatta ttcatcacg gctttgaggc caccatgtc atttatcccg 300
 tataccctct caccatcccc ttgtctactc tgatgccccc agatgcaac tgggcagcta 360
 gttgggcccc taattctggg cctttgttgt ttgttttaac tacttgggca tccaggaag 420
 ctttccagtg atctctacc atgggcccc ctctgggat caagccctc ccaggccctg 480
 tccccagccc cctctgccc agcccacccg cttgccttgg tgcctagccc tccatttggg 540
 agcaggtt 548

<210> 401
 <211> 355
 <212> DNA
 <213> Homo sapiens

<220>
 <221> misc_feature
 <222> (1)...(355)
 <223> n = A,T,C or G

<400> 401
 artgtttcca tgttatgttt ctacacattg ctacctnagt. gctctctggaa acctagcttt 60
 tgaatgtcttc aagtagtcca ccttcatttc actctttgan actgtatcat ctttgccaaag 120
 taagagtggg ggctatttc aggtgctttg acaaaatgac tgggtcctga cttaacgttc 180
 tataaatgaa tgtgctgaag caaagtgncc atggtggcgg cgaagaagan aaagtgtgt 240
 tttgttttgg actctctgtg gtcctttcca atgctgnggg tttccaaaca ggggaagggt 300
 cctttttgca ttgccaagtg ccataaccat gagcactact ctaccatggg tctgc 355

<210> 402
 <211> 407
 <212> DNA
 <213> Homo sapiens

<220>
 <221> misc_feature
 <222> (1)...(407)
 <223> n = A,T,C or G

<400> 402
 atggggcaag ctggataaag aaccaagacc cactggagta tgcgtcttcc aagaaaccca 60
 tctcacatgc ggtggcctac ataggctcaa aataaaggaa tggagaaaaa tctttcaagc 120
 aatggaaaa cagaataaag caggtgttgc actcctactt tctgacaaaa cagactatgc 180
 gaataaagat aaaaaagaga aggacattac aaaggtggtc ctgacctttg ataantctca 240
 ttgcttgata ccaaccctggg ctgttttaat tgcacaaacc aaaaaggataa tttgctgagg 300
 ttgtggagct tctccctgc agagagtccc tcatctccca aaatttgggt gagutgtaag 360
 gntgattttg ctgacaaetc cttctctgua gtttactcca ttccaa 407

<210> 403
 <211> 303
 <212> DNA
 <213> Homo sapiens

<220>
 <221> misc_feature
 <222> (1)...(303)
 <223> n = A,T,C or G

<400> 403
 cagtatttat agctnnaactg aazagctagt agcaggcaag tctcaaatcc aggcaccana 60
 tcccaagcaa gagcatggc atggtgaaaa tgcaaaaggc gaqtctggcc aatctacaaa 120
 tagagaaaca gacctactca gtcatgaaca aaagggcaga caaccaatg gatctcatgg 180
 gggattggat attgttatta tagagcagga agatgacagt gctcgtcatt tggcaccaca 240
 tcttaacnac gaccgaacc cattatctca ataaacctcc attngglaac catgttgaaa 300
 gga 303

<210> 404
 <211> 225
 <212> DNA
 <213> Homo sapiens

<400> 404
 aagtgttaact tttaaaaatt tagtggattt tgaaaaattct tagaggaaag taaaggaaaa 60
 attgttaattg cactcattta cttttanctg gtgaaggttc tctcttgatc ctacaaacag 120
 acattttcca ctctgtgttc catagttytt aagtgtatca gatgtgttgg gcattgtgaat 180
 ctccaagtgc ctgtgttaata aataaagtar ctttatttva ttcat 225

<210> 405
 <211> 334
 <212> DNA
 <213> Homo sapiens

<220>
 <221> misc_feature
 <222> (1)...(334)
 <223> n = A,T,C or G

<400> 405
 gagctgttat actgtgagtt ctactaggaa atcatcaaat ctgagggttg tctggaggac 60
 ttcaataaac ctccccccat agtgatcag cttrcagggg gtccagtcce tctcttaact 120
 tcatccccat cccatgccaa aggaagacc tccctccttg gctcacagcc ctctctagge 180
 ttcccagtcg ctccaggaca gagtgggtta tgttttcagg tccatccttg ctgtgagtg 240
 ctggtgaggt tgtgctcca gcttctgctc agtgcctcat ggacagtgc cagccuatgt 300
 cactctccc tctctcanng tggatccca cact 334

<210> 406
 <211> 216
 <212> DNA
 <213> Homo sapiens

<220>
 <221> misc_feature
 <222> (1)...(216)
 <223> n = A,T,C or G

<400> 406
 ttccatacct aatgagggag ttganatnac atnaaacag gaaatgcatg gatctcaany 60
 gaaacaaaca cccaataaac tcggagctggc agactgacaa ctgtgagaca tycatttgct 120
 acnaaacaca aattttnatgt tgcacccctg tttctaccc tgtgggttat gacaaagaca 180
 actgcaaaag aatnttcaag aaggaggaact gccant 216

<210> 407
 <211> 413
 <212> DNA
 <213> Homo sapiens

<400> 407
 gctgacttgc tagtatcctc tgcattcctt gaagvacaag aacttcatgc cttyaotcat 60
 gtaaatgraa taggabttaa aaataaattt gatatractl ggaacagac aaaaaatatt 120
 gtacaaactt gcacccagtg tcagattcta vacctggcca ctgaggagc aagagttaat 180
 cccagaggtc tatgtcctaa tctgttatgg caaatggatg tcatgacgt accttcattt 240

```

ggagaaattgt catttgteca tgcgacagtt gatacttatt cacatttcac atgggcacac 300
tgccagacag gagaaagtcc tcccatgtta aaagacattc attatcttgt tctcctgtca 360
tgggagttcc agcaaaagt taaaacagaca atgggcacag tctctgtagta aag 413

```

```

<210> 408
<211> 183
<212> DNA
<213> Homo sapiens

```

```

<220>
<221> misc_feature
<222> (1)...(183)
<223> n = A,T,C or G

```

```

<400> 408
ggagctngcc ctcaattccf ccatctctat gttancatat ttaatgtctt ctggnattaa 60
tnccttaacta gttatccct aaagggctca ntaatcccta acagtcctcc ccathgtgag 120
cattatccct ccagtattcn ccttctnttt catttactcc tctctggcta ccatgtact 180
ntt 183

```

```

<210> 409
<211> 250
<212> DNA
<213> Homo sapiens

```

```

<220>
<221> misc_feature
<222> (1)...(250)
<223> n = A,T,C or G

```

```

<400> 409
cccacgcatg ataagctctt tatttctgta agtcctgcta ggaaatcalt aaatctgacg 60
gtgggtttgg ggacrtgaac aaacctcctg taattaatca gctttcagtt tctcccccta 120
gtcctccttt caacaacata ggaggatcct cccctccttt ctgctcacgg ccttatctag 180
gcttccccagt gccccagga cagcgtgggc tatgtttacg gcgctcctt gctggggggg 240
ggccttatgc 250

```

```

<210> 410
<211> 306
<212> DNA
<213> Homo sapiens

```

```

<220>
<221> misc_feature
<222> (1)...(306)
<223> n = A,T,C or G

```

```

<400> 410
ggctgggtttg caagantgan atgaatgctt ctacagctag gacttaacct tgaatggaa 60
agtcttgcaa tcccatttgc aggatcctc tctgacacat cctctgtaga gtagcgcatt 120
cccgggggac ttggaaacag ttggccttgc aaggtgcttg ctccccaaga cacatcttan 180
aaggtgttgt aatggcgaan accgcttctt tctttnttgc ccttcttbal ttatgtgaac 240
nactggttgg cttttcttgn atcttcttta aactggaaag ttcacttngg aaatgaata 300
tcttgc 306

```

<210> 411
 <211> 261
 <212> DNA
 <213> Homo sapiens

<220>
 <221> misc_feature
 <222> (1)...(261)
 <223> n = A,T,C or G

<400> 411
 agagatattt cttagggttaa agttcataga gttcccatga actatatgac tggcccccaca 60
 ggaatctttt tatttaagga ttctgagatt ttgcttgagc aggattagat aaggctgttc 120
 tttaaatgtc tgaatggaa cagatttcaa aaaaaaaccc ccaatctag ggtgggaca 180
 aggaaggaaa gatgtgaata ggctgatggg caaaaaacca atttacctat cagttcragc 240
 cttcttcaa gngaggcaa a 261

<210> 412
 <211> 241
 <212> DNA
 <213> Homo sapiens

<220>
 <221> misc_feature
 <222> (1)...(241)
 <223> n = A,T,C or G

<400> 412
 gtccaatggt acctgacatt tctacaaac cccactcacc gatcatctcg ttgccagtg 60
 ggaacataac agcctgaatt tggaaaaaatt cattctgttt ttgcccagg caatactacg 120
 actgactttg atggctccac aacataaac cagtgtaaa acagaagatg tggagggggg 180
 ctgggagatt tcactgggtc cattgaattc ccaactaac cangcaatta ccagccaac 240
 a 241

<210> 413
 <211> 231
 <212> DNA
 <213> Homo sapiens

<220>
 <221> misc_feature
 <222> (1)...(231)
 <223> n = A,T,C or G

<400> 413
 aactcttaca atccaagtga ctcatctgtg tgcttgaac ctttccactg tctcatctcc 60
 ctcatccag tctctagtac ctctcttttg ttgtgaaggc taatcaaat gaacacaaa 120
 aagtttactc tctcatttg gaaactaaa actctcttct tctgggtct gagggtcc 180
 agaatccttg atcanttct cagatcattg ggaacaccan atcaggaacc t 231

<210> 414
 <211> 234
 <212> DNA
 <213> Homo sapiens

<400> 414
 actgtccatg aagcactgag cagaagctgg aggcacacac caccagacac lccacgcaag 60
 gntggagctg aacacataac ccaactcttc ctggaggcac tgggagacct agagaaggct 120
 gtgagccaag gagggagggg ctctcttttg catgggattg ggatgaagta aggagagggg 180
 ctggaccccc tggagctga ttcaccatg ggggaggtgt attgaggtcc tcca 234

<210> 415
 <211> 217
 <212> DNA
 <213> Homo sapiens

<220>
 <221> misc_feature
 <222> {1}...{217}
 <223> n = A,T,C or G

<400> 415
 gcataggatt aagactgagt atcttttcta cattctttta actttctaag gggcacttct 60
 ccaaacacag accaggtagc aatctctcac tgcctaaagg ntctccccc cactttctca 120
 carctagcaa tagtagaatt cagtcctact tctgaggcca gaagaatggt tcaquaaat 180
 antggattat aaaaaataac aattaagaaa aataatc 217

<210> 416
 <211> 213
 <212> DNA
 <213> Homo sapiens

<220>
 <221> misc_feature
 <222> {1}...{213}
 <223> n = A,T,C or G

<400> 416
 atgcatatnt aaagganact gctctgcttt tagaagacat ctggncctgct ctctgcatga 60
 ggcacagcag taaagctctt tgaattcccag aatcaagaac ctctcccttc agactattac 120
 cgaatgcaag gtgggttaatt gaaggccact attgatgct caaatagaag gatattgact 180
 atattgganc agatggagtc tctactacaa aag 213

<210> 417
 <211> 303
 <212> DNA
 <213> Homo sapiens

<220>
 <221> misc_feature
 <222> {1}...{303}
 <223> n = A,T,C or G

<400> 417
 nagctcttag gcccatcagg gaagttcaca ctggagagaa gtcatacata tgaactgtat 60
 gtgggaaagg ctttactctg agttcaatc tcaagcaca lcaagaggtc cactctggag 120
 agaagccata caaatcgaat gagtgtggga agagcttcag gagggattcc cattatcaag 180
 ttcattctagt ggtccacaca ggaagagaaac cctataaatg tgaatattgt gggagaggct 240
 tcaatcaag ctctctcttc caaatccatc agaaagggcca cagtatanen aaacctttta 300
 agt 303

<210> 418
 <211> 328
 <212> DNA
 <213> Homo sapiens

<220>
 <221> misc_feature
 <222> (1)...(328)
 <223> n = A,T,C or G

<400> 418
 tttttggcgg tgggtgggga gggacgggac angagtctca ctctgttgcc caggctggag 60
 tgcacaggca tgatctcggc tcactacaac cctgacctcc catgtccaag cgattcttgt 120
 ggcctcggct tccctgtggt tagaattaca ggcacatgcc accacaccca gctagttttt 180
 gtatttttag tagagacagg gtttcacct gttggccagg ctggtctcaa actcctnacc 240
 tcagnggtca ggcctggtctt aaactcctga cctcaagtga tctgccacc tccgctccc 300
 aaagtgcctn gattacaggc cgtgagcc 328

<210> 419
 <211> 389
 <212> DNA
 <213> Homo sapiens

<220>
 <221> misc_feature
 <222> (1)...(389)
 <223> n = A,T,C or G

<400> 419
 cctcctcaag auggcctgtg gtccgacctc cggcaaccaa gaagcctgca glgcatatg 60
 acccttgagg catggactgg agcctgaaag gcagcgtaca ccttgctcct gatcttgctg 120
 ctctgttccc ctctgtgggt ccattccatg caccgttgtt gcactgaggc ttgtgcaggc 180
 cgagcaaggc caagctgggt caaaggagca ccagtcacct ctgccacggt gtgccaggca 240
 ccggttctcc agccacccaa ctcactcgtt cncgcacatg gcacatcagt tctctatccc 300
 taagggtagg accaaagggt atctgctttt ctgaagtcct ctgctctatc agccatcacg 360
 tggcagccac tcnngctgtg togaacggg 389

<210> 420
 <211> 408
 <212> DNA
 <213> Homo sapiens

<400> 420
 gttcctccta actcctgcca gaaacagctc tccccaacat gagagctgca cccctcctcc 60
 tggccagggc agcaagcctt agccttggtt tcttggtttt gctttttttc tggctagacc 120
 gaagtgtact agccaaggag ctgaagtttg tgactttggt gtttcggcat ggagaccgaa 180
 gtcccattga cacccttccc actgacccca taagygaaac ctcatggcca caaggatttg 240
 gccaaactca cccgctgggc atygagcagc attatgaact tggagagtat ataagaaaga 300
 gatatagaaa attcttgaaat gagtccctata aacatgaaca ggttctatct cgaagcacag 360
 acgttcgacc gactttgatg aagtgcctat accaaccttg caagcccg 408

<210> 421
 <211> 352
 <212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> {1}...{352}

<223> n = A,T,C or G

<400> 421

```

gctcaaaaat ctttttactg atnggcctgg ctacacaatc attgactatt acggagggca 60
gagagagact aggcctggcc tgggagccct gtgcttacta naagcacatt agattatcca 120
ttactgaca gaaacaggtct ttttgggtc cttcttctcc accacnatat acttgcagtc 180
ctcttctttg aagattcttt ggcagttgtc ttgttcataa cccacaggtg tggaaacaag 240
ggtgcaaat gaaatttctg tttcgtagca agtgcattgc tacaaggtg gcaagtctgc 300
cactccaggt ttattgggtg tttgtttcct ttgagatcca tgcatttctt gg 352

```

<210> 422

<211> 337

<212> DNA

<213> Homo sapiens

<400> 422

```

atgccacacat gctggcaatg cagcgggggg tccaaggcct gcatatccag cccaagctgg 60
cgaatgatcga cggcaaccgt tgcocgaagt tgcctatgcc agccgaagcg gtggtcaagg 120
gcgatagcaa ggtgcggggg atcggggggg cgtcaatcct ggccaaagtc agcngl'gac 180
gtgaaatggc agctgtcgaa ttgatctacc cgggttctgg catcggcggg catcagggtc 240
atccgacacc ggtgcacctg gaagccttgc agcngctggg ggcgcgcgcc attcaccgac 300
gcttcttccg ccggtacggc tggcttatga aaattat. 337

```

<210> 423

<211> 310

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> {1}...{310}

<223> n = A,T,C or G

<400> 423

```

gctcaaaaat ctttttactg atatggcatg gctacacuat cattgactat tagaggccag 60
aggagaatga ggcctgggct gggagccctg tgcctactan aagcncatta gattatccat 120
tactgacag aacaggtctt ttttgggtc ttcttctcca ccacgatata ttgcagtc 180
tcttcttga agattctttg gcagttgtct ttgtcataac cccacaggtg anaaacaagg 240
gtgcaacatg aactttctgt ttcgtagcaa gtgcattgtc cccagttctc agtctgccc 300
tccgaattta 310

```

<210> 424

<211> 370

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> {1}...{370}

<223> n = A,T,C or G

```

<400> 424
gctcaaaat ctcttctctg ataggcatgg ctacacaatc attgactatt agaggucaga 60
ggagaatgag guctggcctg ggagccctgt gctactaga agcacattag attatccatt 120
cactgacaga acaggtcttt tttgggtcct tcttctccac cactatatac ttgtagtctt 180
ccttctttaa gattcttttg cagttgtctt tgcataaacc cccagggtga gaaacatcct 240
ggttgaatct cctggaaact cctcattagg tatgaattag catgatgcat tgcataaagt 300
caccgaaggty gcaaaagatca caacgctgac caggaaaca ttcatgtgga taagcaggac 360
tcgtrgacg 370

```

```

<210> 425
<211> 216
<212> DNA
<213> Homo sapiens

```

```

<220>
<221> misc_feature
<222> (1) ... (216)
<223> n = A,T,C or G

```

```

<400> 425
aattgctatn ncttattttt ccaactcaaa taattaccaa aaaaaaaaaa tnttaaataa 60
taacaaacna caatcaaggc aaanaaaaca ggaatggnty actntgcata aatnaggcca 120
anattatcca ttatnttaaa ggttgacttc agntacagc acacagacaa caatgccacg 180
gaggntntcu ggaacgctcg atgtntctty aggagg 216

```

```

<210> 426
<211> 596
<212> DNA
<213> Homo sapiens

```

```

<400> 426
cttcagtgga ggataaccct gttgccccgg gccagggttc tccattaggc ctgattgat 60
tggcagtcag tgatggaagg gtgttctaat cattccgact gcccaaggc tcgctggcca 120
gctctctgtt ttgctgaagt ggcagtagga cctaatttgt taattaagag tagatggtga 180
gctgtccttg tattttgatt aacctaatgg ccttcccagc ccgautcgga ttcagctgga 240
gacatcacgg caacttttaa tgaatgatt tgaagggtcc ttaaggaggc ctcccggtta 300
ttagggaagt catctgcact gataactctt tggcagctga gctggtcgga gctgtggccc 360
aaacgcacac ttggcctttt gtcttgagat accactctta atcttttagt catgcttgag 420
ggtaggatygc cttttragct ttaacccaat ttgactgac ttggaagtgt agccaggaga 480
atacartcat atactcgtgg gcttagaggc caccgacgat gtcatgggtc tactgcttga 540
gtcccgtctg tcccatccca ggaccttcca tcggctgagta cctgggagcc cgtgct 596

```

```

<210> 427
<211> 107
<212> DNA
<213> Homo sapiens

```

```

<220>
<221> misc_feature
<222> (1) ... (107)
<223> n = A,T,C or G

```

```

<400> 427
gaagaattca agttagggtt attcaagggg ctlaaagaga atccctanac caggatuccag 60

```

cccgaggagca gccttanaga gctccctgttt gactgcccgg ctcaagg 107

<210> 428
 <211> 38
 <212> DNA
 <213> Homo sapiens

<220>
 <221> misc_feature
 <222> (1)...(38)
 <223> n = A,T,C or G

<400> 428
 gaacttcma ankangactt tttcactat tttacatt 38

<210> 429
 <211> 544
 <212> DNA
 <213> Homo sapiens

<400> 429
 ctttgctgga cggaaataaa gtggacgcaa gcatgacctc ctgatgaggg cgcctgcattt 60
 attgaagagc ggcctgcagcc ctgcgggttca gattaaaaac cgagaattct atagacgccc 120
 atatccacga actcctgaag gactttctga tttatccaca atccaatcat cggcttttcag 180
 tttggatggg ggcctcatcc ctgtagaacc tgacltggcc gtggctggga tccactcgtt 240
 gccctccaut ccagttacac ctccctccac atctctcct gtlgggtctg tgcctgctca 300
 agatactaag cccacatttg agatgcagca gncatctccc ccatttccct ctgtccatcc 360
 tgaatgtcac ttaaaaaatc tgcctcttla tgaatgcttt gahgttctca tcaagcccac 420
 gaggtttagt caaagcagta ttcagcgatt tcaagagaag tttcttattt ttgctttgac 480
 acctcaacaa gttcagagaga tatgcatatc cggggatttt ttgcccgggt gtaggagaga 540
 tttt 544

<210> 430
 <211> 507
 <212> DNA
 <213> Homo sapiens

<220>
 <221> misc_feature
 <222> (1)...(507)
 <223> n = A,T,C or G

<400> 430
 cttctcncaa tggggctccc aaacttggtt gtgcagtggg aactccgggg gaattttgaa 60
 gaacactgac acccatcttc caccrcgaca ctctgattta attgggctgc agtgagaaca 120
 gagcatcaat ttaaaaagct gcccaagaatg ttntcctggg cagcgttgtg atctctgccc 180
 ccttrgtgac tttatgcaat gcataatgct atttcatacc taatggggga gttccaggag 240
 attcaaccag gatgtttcta cncctgtggg tcatgacaaa gacaactgcc aaggaatntt 300
 caagcaggag gactgcaagt atatcgtggc gyagaagaag gacccaaaaa agacctgttc 360
 tgcagtgaa tggatantct aatgtgcttc tagtgggcac agggctcccc ggcaggccct 420
 cattctcctc tggcctctaa tagtcaatga ttgtgtagcc atgacctatc gtaaaaagat 480
 ttttgagcaa aaaaaa 507

<210> 431
 <211> 392

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)...(392)

<223> n = A,T,C or G

<400> 431

```

gaaagattcag aatggataaa aacaaatgaa gtacaaaata tttcagatlt acatagcgat 60
aaacaagaaa gcacttatca gaggactta caaatggagg taactctan aaccatcatc 120
taccatgggt aatgttgaga ttagacacgc tgtattatct gtacattgca aaacactaga 180
aagagatggg aaacaaaatc caaggagttt tgtgtgtgga gtccctgggt ttcacacaga 240
catcattcca gcattctgag attagggngc ttggggatca ttcctggagtc ggaatgttca 300
acaaaagtga tgttgttggg taactgttac aacttctgga tctatgcaga catggaagg 360
gcaatgaatc tggcttttac tctgtgttcc ct

```

<210> 432

<211> 387

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)...(387)

<223> n = A,T,C or G

<400> 432

```

ggtatccta cacaatcaca tatagctgta gtacatgttt tcattggngt agattacac 60
aatgcaagg caacatgtgt agatctcttg tcttattctt ttgctatca tactgtattg 120
ngtagtccaa gctctcggga gtccagccac tgggaacat gctccctta gatcaacctc 180
gtggaacctn ttgttgnatt gtctgaacty tagngccctg tatcttgcct ctgtctgnga 240
attctgttgc tctcggggga tttccttngg atgcagagga ccaccacaca gatgacagca 300
ctctgaattt ntccaatcac agctgcgatt aagacatact gaaatcgtao aggaacggga 360
acaacgtata gaacactgga gtccctt

```

<210> 433

<211> 281

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)...(281)

<223> n = A,T,C or G

<400> 433

```

ttcaactagc anagaaact gcttcagggu gctgtaaatg aaaggcttcc acgaggttat 60
ctgattaaag aacactaaga gagggaacag gctagaagcc gcaggatgtc tacactatag 120
caggcactat ttgggttggc tggaggagcl gtggaaazca tggagagatt ggugctggag 180
atcgccgtgg ctatctctn ttgntattac accagnaggy ntctctgtnt gccactggt 240
tnnaaaacag ntatacaata atgatagatc aggaacacac t

```

<210> 434

<211> 484

<212> DNA

<213> Homo sapiens

<400> 434

```

tttctaaata aguatctagt gctcagtcct tactgggtac tctttctctc cctctctctg 60
aatttaattc ttccaacttg caabctgcaa ggattacaca ttccactctg atgtatatctg 120
tgctgcaaaa aaaaaaaagt gtctttgttt aaaaactact ggctctgtga tccatcttgc 180
ttttcccca ttggaactag tcatbaaccc atctctgaac tggtagaaaa acatctgaag 240
agctagtcta tuagcatctg acaggtgaat tggatgggtc tcagaacctc tccaccaga 300
cagcctgttt ctatcctgtt taataaatta gtctgggttc tctcatgaa taaccaaac 360
tgctccatct tgcacataa aagtcctgtg ctggaagttt agtcagcacc cccaccaaa 420
tttatttttc tatgtgtttt ttgcaacata tgagtgtttt gaaataaag taccatgtc 480
ttta
484

```

<210> 435

<211> 424

<212> DNA

<213> Homo sapiens

<400> 435

```

gagcagctca gagcaggtca cttctctgct tccagctcct ccttcaggga agcccatctg 60
gggtagcttc caatatcgca gggtcttact cctctgcttc tataagctca aacccaccaa 120
cgatcgggca agtaaacccc ctccctcgcc gacttcggaa ctggcgagag ttcagcgcag 180
atgggctctt ggggaggggg caagatagat ggggggggag ggcatgggtc ggggtgaccc 240
cttgagagaa ggaaaaaggc cacaagaggg gctgccaccg ccactaacgg agatrgccct 300
ggtagagacc tttaggggtc tggaaacctc ggactcccca tgcctcaact ccccaatct 360
gctatcagaa acttaaacct ggggaatttc tctgtttttc actcgcacta aattcagagc 420
aaac
424

```

<210> 436

<211> 667

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1) ... (667)

<223> n = A,T,C or G

<400> 436

```

accttgggaa nactctcaca atataaaggg tcttagactt tactccaaat tccaaaagg 60
tcttggccat gtaatcttca aagttttccc aaggtagcta taaaatcctt ataagggtgc 120
agcctcttct ggaattcttc tgatttcaaa gtctcactct caagtctctg aaaaagagg 180
cagttcttga aagtcaggta tagcaactga tcttcagaaa gaggaactgt gtgcaccggg 240
atgggctgcc agagtagggt aggatttcag atgctgacac ctctcggggg aaacagggct 300
gccaggtttg tcatagcact catcaaaagtc cggctcaacgt ctgtgcttcg aatataaac 360
tgttcatgtt tataggactc attcaagaat tttctatata tttttcttat atactctca 420
agttcataat gctgctccat gccagctcgg gtgagttggc caaatccttg tggccatgag 480
gattccttla tggggtcagt gggaaagggt tcaatgggac ttcgggtctc atgccgaac 540
accaaagtca caaacttcaa ctctctgggt agtacctctc ggtctagcaa gaaaaaagg 600
agaaacaaag agccaaggct aaggcttgnr gacctggcag gaggaggggt gcaqctctca 660
tgttgag
667

```

<210> 437

<211> 693

<212> DNA

<213> Homo sapiens

<400> 437

```

ctacgtctca accctcattt ctaggtaagg aatcttaagl ccaagatat taagtgaetc 60
acacagccag gtaaggaaag ctggattggc acactaggac cctaccatac cgggttttgt 120
taagctcag gttaggaggc tgaataagctt ggaaggaaat ccagacagct ttccagatc 180
ataaagata attotttagc catgttcttc tccagagcag acctgaaatg aacgcacagg 240
aggtactect ctattttcac cctotttgc tctactctct ggcagtcaga cctgtgggag 300
gccctgggag aaagcagetc tctggatgtt tgtacagatc atggactatt ctctgtggac 360
catttctcca ggtcacacct ggtgtcacta ttgggggggac agccagcatc tttagcttcc 420
atttgagttt ctgtctgtct tcagtagagg aaacttttgc tcttcacact tcacatclga 480
acacctaacct gctgttgcct ctgaggtggt gaaagacaga tatagagctt acagtattta 540
tctattttct aggaactgag ggctgtgggg taacttgcgg tgcnaaaava gacccctgtt 600
taaggacatg ttgcttcaga gatgtctgta actatctggg ggtctgtgtg gclctttacc 660
ctgcatcatg tctctctctg gctgaaaatg acc

```

693

<210> 438

<211> 360

<212> DNA

<213> Homo sapiens

<400> 438

```

ctgcttatca caatgaatgt tctctgggc agcgttgtha tctttgccac ctctgtgact 60
ctatgcacag catcttgcta ttcatacct aatgagggag ttcaggaaga ttcaaccagg 120
atgtttctac acctgtgggt tatgacnaag acaactgcc aagaaatcttc aagaaggagg 180
actgcaagta tctctgttgg agaagaagga ccaaaaaaag acctgttctg tcagtgaatg 240
gataatctaa tgtgtttcta gtaggacacg ggctcccagg ccaggcctca ttctctctct 300
gctcttaata gtcaataatt gtgtagccat ggcctatcagt aaaaagattt ttgagcaaac 360

```

<210> 439

<211> 431

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)...(431)

<223> n = A,T,C or G

<400> 439

```

gttcttntta actcctgcc aagacagetc tctcaacat gagagctgca cccctctctc 60
tggccagggc agcaaggcct agccttggt tcttgtttct gctttttttc tggctagacc 120
gaagtgtact agccaaggag ttgaagtctg tgactttggt gtttcggcat ggagaccgaa 180
gtcccattga cactctctcc actgacccca tkaaggaaac ctcatggcca caaggatttg 240
gccaactcar ccagctgggc atggagcagc attatgaact tggagagtat ataaayaaaga 300
gatatagaan attcttgaaat gactcctata aacatgaaca ggttttatct cgaagcacag 360
acgttgaccg gactttgatg agtgctatga caaacctggc agcccgctga cgcggccgag 420
aatttagtag t

```

431

<210> 440

<211> 523

<212> DNA

<213> Homo sapiens

<400> 440

```

agagataaag cttaggtcaa agttcataga gtcccatga actalatyac tggcacaaca 60
ggatcttttg tatttaagga ttctgagatt ttgcttgggc aggttagat. aaggtgttc 120
tttaaatgtc tgaatggaa cagatttcaa aaaaaaacc cacaatctag ggtgggaaca 180
aygaaggaa gatgtgaata ggtgtatggg caaaaaacaa atttaccat. caattccagc 240
cttctctcaa ggaagggcaa agaaaggaga taaggtggag acatctgaa agttctctcc 300
actggaaac tgcactatc tgttttata tttctgttaa atatatgag gttacagaac 360
taaaattaa aacttctctg tgttctctgg tcttggaaac ttatcttcc ttttaagaa 420
acaaaatca aacttctcag aagatttga tgtatgtat acatatagca gctcttgaag 480
tatatctatc atagcaata agtcatctga tgaagcaag cta 523

```

<210> 441

<211> 430

<212> DNA

<213> Homo sapiens

<400> 441

```

gttcttctca actcctgcca gaacagctc tctcaacat gagagctgca cccctcctcc 60
tggucagggc agcaagcctt. agccttggct tcttgttct gcttttttc tggctagaac 120
gaagtgtact agccaaggay ttgaagtttg tgaacttggg gtttgggcat ggagacgaa 180
gtcccataga cacttttccc actgaaccca taagggaatc ctcatggcca caaghatttg 240
gccaaactac ccagctgggc atggugcagc attatgaact tggagagtac atnagaaga 300
gatctcgaaa attcttgaat gagtctata aacatgaaca ggtttatatt cgaagcacag 360
acgttgaccg gactttgagc agtgcctatga caaacctggc agcccgctga agcgcccgcg 420
aatctcgtcg 430

```

<210> 442

<211> 362

<212> DNA

<213> Homo sapiens

<400> 442

```

ctaaggaaat agtagtgctc ccctcacttg tttggagtyt gctattctaa aagattttga 60
tttcttggaa tycatattat attttaactt tgggtgggga aagagttata ggaccacagt 120
cttcaactct gatatttga attaatctt ttattgcact tgttttgacc attaagetat 180
atgtttagaa atgggtcattt tanggaana ttgaaaaat tctgataata gtgcagaata 240
aatgaattaa tgttttactc attttatatt gaactgttaa tgacaaataa aattctttt 300
tgatctattt ttgttttcat ttaccagaat aaaaactaag aattaaaagt ttgatcacag 360
tc 362

```

<210> 443

<211> 624

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)...(624)

<223> n = A,T,C or G

<400> 443

```

tttctttttt guaaacaaat atacatcaca gtgaatgtg caatccttgc aaattgcaay 60
ttgaazagaat taaatcaga ggaggggaga gaagagatc tcagtaggga ctgagcacta 120
aatgcttatt ttanaagaaa tgtaaagayc agaaagcaat. tcaagctacc ctgcttcttg 180
tgcctggctag tactcaggctc ggtgtcagca gacgagga ttgaacatg caattgtgag 240

```

```

cccaaacac agaaaatggg gtgaacttgg ccaactttct attaacttgg ttccctgttt 300
tataaaatat tttgactaat atcacctact tcaaaagggc gttatgaggg ttatatgaac 360
taacgcttac aaaaacattt aacatagata acataggtgc aagtactatg tatctggtaa 420
atggttaaac tccttattat taaagtcaac gctaaaatga atgtgtgtgc atatgctaat 480
agtacagaga gagggcattt aaaccaaata agggcctgga gggaaagggtt cctggaaaga 540
ngatgcttgt gctgggtcca aatcttggtc tactalgaac ttggccaaat tatttaaaat 600
ttgtccctat ctgctaaana galc

```

624

```

<210> 444
<211> 425
<212> DNA
<213> Homo sapiens

```

```

<220>
<221> misc_feature
<222> (1)...(425)
<223> n = A,T,C or G

```

```

<400> 444
gcacatcatt nntcttgcct tctttgagaa taagaagatc agtaaatagt tcagaagtgg 60
gaagctttgt ccaggcctgt gtgtgaaacc aatgttttgc ttgaaatag aacaaagtaag 120
ttcattgcta tagcataaca caaaatttgc ataagtggta gtacgcaaat ccttgaalgc 180
tacttaatat gagaggttgg taaaatcctt tgtgcaaac tctaactncc tgaatgtttt 240
gctgtgctgg gacctgtgca tgcagacaa gccaagctg gctgaagag caaccagcca 300
cccttgcaat ctgcaactc ctgctggcag gatctgtttt tgcacctgt gaagagccaa 360
ggaggcacca gggcraaagt gagtngactt atggtcgacg cggccgcgaa tctagtagta 420
gtaga

```

425

```

<210> 445
<211> 414
<212> DNA
<213> Homo sapiens

```

```

<220>
<221> misc_feature
<222> (1)...(414)
<223> n = A,T,C or G

```

```

<400> 445
catgtttatg nttttggatt actttgggca cctagtgttt ctaaatcgtc tatcattctt 60
ttctgttttt caaaagcaga gatggccaga gtctcaacaa actgtatctt caagtctttg 120
tgaatttctt tgcattgtgg agattatttg atgtagtctt ctttaactag catatnaatr 180
tgggtgtgtt caqatnaatg aacagcaaaa tgtggtggaa ctacnatttg gaacattgtg 240
aatgaaaaat tgtgtctcta gattatgtaa caataaata ttctctaacc attgatcttt 300
ggatttttat aatcctactc acaaatgact aggcctctcc ccttgtattt tgaagcagtg 360
tgggtgctgg attgataaaa aaaaaaaag tcgargcggc cgcgaattta gtatg 414

```

```

<210> 446
<211> 631
<212> DNA
<213> Homo sapiens

```

```

<220>
<221> misc_feature
<222> (1)...(631)

```

<223> n = A,T,C or G

<400> 446

```

acaaattaga anaaagtgcg agagaaracc acataacttg tccgggacat tacaaaggct 60
tctgcattga tgggaagtgt gaggcattct tcaatatgca ggagccalcl tgcagggtgt 120
atgctgggtta tactgggcaa cactgtgaaa aaaggacta cagtgttcta tanglttctc 180
ccgggtcctgt acgatttcag taagtcttaa tccgagctgt gatgggaca attcagattg 240
ctgtcatctg tctggtggtc ctctgcacca caagggccaa cctttaggta atagcatttg 300
actgagattt gtaaaccttc caaccttcca ggaatgccc caggaagcac agaattcaca 360
gacagaggca caatcacggg cactacagtt cagacaatcc accagagcgg tccacgggt 420
taactcaag ggagcatgtt ccacagtggc tggactaccg agagcttggc ctacacaata 480
cagtatctat gacaaagaa taagacaaga gatctacaca tyttgccttg catctgtgtg 540
aatctacacc aatgaaaaca tgtactacag ctatatttga ctatglatgg ctatatttga 600
aatagfatac attgtcttga tgtttttct g 631

```

<210> 447

<211> 585

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> {1}... (585)

<223> n = A,T,C or G

<400> 447

```

ccttgggaaa antnlcaca tataaagggt cgtagactll actccaaatt ccaaaagggt 60
cctgggcaatg taatcctgaa agttttccca aggtagctat aaaatcctta tgggggtgca 120
gctctctctg gaattcctct gatttcaag tctcactctc aagttcttga aaacgagggt 180
agttcctgaa aygcagggtat agcaactgat ctccagaaag aggaactgtg tgcacgggga 240
tgggctgcca gaggaggata ggaattccga tgcctgacac tcttggggga aacaggggtg 300
ccaggcttctg ctatagcctc atcaagtcac ggtcaacgtc tgtgcttcga atctcaacct 360
gttcatgttt ataggactca ttcaggaatt tcttatatct ctctcttata tactctccaa 420
gttcataatg ctgctccatg cccagctggg tgggttgggc caatccttgt ggccatgagg 480
attcctttat ggggtcagtg ggaagggtgt caatgggact tgggtctcca tgcggaaaca 540
cnaaagtcac aaattcaac tcttggcta gfacacttgg gtcta 585

```

<210> 448

<211> 93

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> {1}... (93)

<223> n = A,T,C or G

<400> 448

```

tactctgtgg tctttctgan nncggactg accntgccag ccttgccgan gggccnccat 60
ggctccttag tgcctctggag agganggggc tag 93

```

<210> 449

<211> 706

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> {1}...{706}

<223> n = A,T,C or G

<400> 449

```

ccaagtttcct gctntgtgct ggacgctgga caggggggcaa aagcctttgc tegtgggtca 60
ttctgancac cgaactgacc atgccagccc tgcctatggt cctccatggc tccctagtgc 120
cctggagagg aggtgtctag tccagagagta gtccctggaag gtcgctctcg ngaggagcca 180
cggggacagc atcctgcaga tggtcggggc cgtcccatte gccattcagg ctgcgcaact 240
gttgggaagg gcgactgggt cgggctctct cgtatttacc ccagctggcg aaagggggat 300
gtgctgcaag gcgatttact tgggttaacg caggggtttc ccagtcncca gtttgtaaaa 360
cgacggccag tgaattgaat ttgggtgacn ctatagaaga gctatgacgt cgcattgcaag 420
cgtacgttca cttggatcct cttagagcgg cgcctactac tactaaatc ggggcgcgt 480
cgactggga tccncaactga ggaagtggag agtgacatgt actggacnct gtccatgaa 540
cactgagcag aagctggagg cacaacgnc cagaactca cagctactca ggggctgag 600
acaggttga acctgggagg tggggttgc actgagctga gatcagggcn ctgcnccca 660
gcatggatga cagagtgaaa ctcctctta aaaaaaaa aaaaaa 706

```

<210> 450

<211> 493

<212> DNA

<213> Homo sapiens

<400> 450

```

gagacggagt gtcaactctgt tgcctcggct ggagtgcagc aagacactgt ctaagaaaaa 60
acagttttta aaggtaaaaa accataaaaa gaaatctcct atagtggaaa taagagagtc 120
aaatgaggtc ggaactttta caaagggatc ttacagacat gtgcgcaata tcaactgcacg 180
agcctaagta taagaaacaa ctttggggag aaacacacat ttgacagtga ggtacaaattc 240
caggtcaggt agtgaaatgg gtggaaattaa actcaattta atcctgccag ctgaaacgca 300
agagacactg tcagagagttt aaaaaagtga ttctatccat gagggtgattc cacagctctc 360
tcaagtcac acatctgtga actcacagac caagttctta aaccactgtt caaactctgt 420
tacacatcag aatnacctgg agagctttac aaactcccc tgcgagggtt cgaagcggcc 480
gcgaatttga tag 493

```

<210> 451

<211> 501

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> {1}...{501}

<223> n = A,T,C or G

<400> 451

```

gggcgcgtcc cattegccat tccggctguy caactgttgg gaagggcgat cgggtcgggc 60
ctcttcgctc ttacgccagc tggcgaaagg gggatgtgct gcaaggcgat taagtgggt 120
aacgccaggg ttttccnagt cncgagcttg taaaacgacg gccagtgant tgaatttagg 180
tgacnclata gaaagagtat gacgtcgcat gaaagcgtae gtaagcttgg atcctctaga 240
ggggcgcgtc actactacta aattcgcggc cgcgtcgacg tgggatccnc actgagagag 300
tgggaggtga catgtgctgg acnctgtcca tgaagcactg agcagaagct ggaagcccaa 360
cgcnccagac actcacaggt actcaggagg ctgagaacag gttgaacctg ggaggtggag 420
gttgcactga gctgagatca ggcncctgcn cccagcatg gatgaragag tgaactcca 480

```

tcttaaaaaa aaaaaa00000 A

501

<210> 452

<211> 51

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)...(51)

<223> n = A,T,C or G

<400> 452

agaggggttt accnttacc aacnttttag gatgggnntt ggggagcaag c

51

<210> 453

<211> 317

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)...(317)

<223> n = A,T,C or G

<400> 453

tacatcttgc tttttcccca ttggaantag tcatcaacc atctctgaac tggtaguaaa 60
acatctgaag agctagtctc tcagcatctg gcaagtgaat tggatcgttc tcagaaccat 120
ttcaccane caguctgttt ctatcctgtt taataaattc gtttgggttc tctacatgca 180
taacaaacc tgcaccaatc tgcacacata aagtcctgtg cttagaagtt antcagcacc 240
cccaccasac ttatttttct tatgtgtttt ttgcaacata tgaagtgttt gaaataaagg 300
taaccatgtc ttatta 317

<210> 454

<211> 231

<212> DNA

<213> Homo sapiens

<400> 454

ttcgggtac aatcaactct cagggtctag tttccttcta tagatgagtc agcattaata 60
taagcracgc caggtctctg agggagtctt gaattcctct ctgctcactc agtagaacca 120
agaagaccac attcttctgc atcccagctt gcaacacaaa ttgtctctct aggtctccac 180
ccttctctct tcaagtgttc aaagctcctc acaatttcat gaacaacagc t 231

<210> 455

<211> 231

<212> DNA

<213> Homo sapiens

<400> 455

taccaagag ggcataataa tcagtctcac agtagggctc accatctctc aagtgaaduu 60
cattgttccg atggggtttt ccacaggcta cacacacaaa acaggaaaca tgccaagttt 120
gttcaacgc attgatgact tctccaagga tcttcttctg gcacagacca cattcagggg 180
caaggaattt ctcatagcac agctcaaat acagggtctc tttctcctct a 231

<210> 456
 <211> 231
 <212> DNA
 <213> Homo sapiens

<400> 456
 ttggcaggta cccctacaaa gaagacacca taccttatgc gttattaggt ggaataatca 60
 ctccattccg tattatcggt attattcttg gagaaacct gtctgtttac tgtaaccttt 120
 tgcactraaa ttcttttata aggaataact acctaggcac tatttacaag gccattggaa 180
 cctttttatt tgggtgcagct gctagtcat cctgactga cattgcacag t 231

<210> 457
 <211> 231
 <212> DNA
 <213> Homo sapiens

<220>
 <221> misc_feature
 <222> (1)...(231)
 <223> n = A,T,C or G

<400> 457
 cggagtagcc aggggtctga aaatctctnn ttantagtc gatagcaaaa ttgttcctca 60
 gcattcccta atctgacttt gctataatta gattttcttc cattagagtc catcacagttc 120
 catttgattt tattagcaat ctctttcaga agaccttga gatcattaag ctctgtatcc 180
 agttgtctaa atcgtatgct ctttccctct ggggtctgc tggcttctgc n 231

<210> 458
 <211> 231
 <212> DNA
 <213> Homo sapiens

<400> 458
 aggtctgggt cccccactt ccaatccct ctactcttc taggaactgg ctgggtcaag 60
 agaagagggg tggctaggga agcgtttgag acctgaagcc ccacctcta ccttcttca 120
 accacctaac ctgggtaac agcatttggg attatcattt ggyatgagta gaatttcaa 180
 ggtctctgggt taggcatttt gggggggcag acccagggag aagaagcttc t 231

<210> 459
 <211> 231
 <212> DNA
 <213> Homo sapiens

<400> 459
 ggtacggagg ctgcctgaca cagagaaacc ccaacgcgag gaaaggaatg gccagccaca 60
 ccttcgggaa acctytggtg gccacacagt cctaacggga caggacagay agacagagca 120
 gccctgcaat gttttccctc caccacagcc atcctgtccc tcattggctc tgtgctttcc 180
 actatacaca gtccacctcc caatgaqaaa caagaaggag cccctccac a 231

<210> 460
 <211> 231
 <212> DNA
 <213> Homo sapiens

<400> 460

```

gcagggtatga catgctgcaa caacagatgt gactaggaaac ggccggf.gac atgaggagggg 60
cctatcacc cttctctggg ggcctgcttct tcacagtgat catgaagcct agcagcaaat 120
ccacactccc caaagugaca cggccagcct ggagcccaaca gaagggtcct cctgacgcca 180
gtggagcttg gtccagctc caglcacccc ctaccaggct caaggataga a 231

```

<210> 461

<211> 231

<212> DNA

<213> Homo sapiens

<400> 461

```

cgagggtttga gaagctctaa tgtgcaagggg agccgagaag caggcggcct agggagggtc 60
gcgtgtgctc caaagaggtg tgtgcatgnc agagggggaaa caggcgcttg tgtgtcctgg 120
gtgggggttca gtgaggagtg ggaatttggg ttagragaac caagccgttg ggtgaataag 180
aggggggattc catggcactg atagagcctt atagtttcag agctgggaat t 231

```

<210> 462

<211> 231

<212> DNA

<213> Homo sapiens

<400> 462

```

aggtaccctc attgtagcca tgggaaaatt gatgttcagt ggggatcagt gaattaatg 60
gggtcctgca agtataaaaa ttaaaaaaa aaagattcat gcccaatctc atatgatgag 120
gaagaaactgt tagagagacc aaacagggtag tgggttagag atttcagag tcttacattt 180
tctagaggag gtatttaatt tttctcact catccagtgt tgtatttagg a 231

```

<210> 463

<211> 231

<212> DNA

<213> Homo sapiens

<400> 463

```

tactccagcc tggtagacaga gcgagacccct atcaccgccc cccacccccc caaaaaaaaa 60
actgagtaga caggtgtcct cttggcatgg taagtcttaa gtccctccc agatctgtga 120
catttgacag gtgtctttc ctctggacct cgggtgtccc atctgagtga gaaaaggcag 180
tggggagggtg gatcttccag tcgaagcggg atagagagcc gtgtgaaaag c 231

```

<210> 464

<211> 231

<212> DNA

<213> Homo sapiens

<400> 464

```

gtactctaaag attctatcta agctgctttt tctgggtggg aaagtctaac cttagtgact 60
aaggacatca catatgaaga atgtttaagc tggaggtggc aacgtgaatt gcaaacaggg 120
cctgtctcag tgaactgttg cctgtagtc cagctacttg ggagtctgtg tgaggccagg 180
ggtagccagcg caccagctag atgctctgta attctaggc cccattttcc c 231

```

<210> 465

<211> 231

<212> DNA

<213> Homo sapiens

<400> 465

```

calgtttgttg tagctgtggg aatgctgggt gcatctcaga cagggttacc ttcagctcct 60
gtggcaaat agcaacaaal tutgacatca tatttatggg tttgtatct tttgtggtga 120
aggatggcag aatttttgc tgggtt.cala atatactcag attagttcag ctucacaga 180
taaaactggag acatgcagga cattagggta gtgttgtagc tctggtantg a 231

```

<210> 466

<211> 231

<212> DNA

<213> Homo sapiens

<400> 466

```

caggtaacct tttccattgg atactgtgct agcaagcatg ctctccgggg tttttttaat 60
ggccttcgaa cagaacttgc cacat.accaa ggtataatag tttctaacat ttgccaggga 120
cctgtgcaat caaatattgt ggagatttc ctactgggg aagtcaaaaa gactataggt 180
aatcaaggag auctgtcrra caagatgaca accagtcgtt gtgtgcggct g 231

```

<210> 467

<211> 311

<212> DNA

<213> Homo sapiens

<400> 467

```

gtacacccctg gacacgtcaa atctgaactg gttcggcact catctttcat gagatggatg 60
tggcggcttc tctccttttt cat.caagctt cttcagcagg gaggccagga cagcctgcac 120
tgtgctttaa cagaagggtct tyagattcta agtgggaatc atttcagtga ctgtcatgtg 180
gcctgggtct ctgcccaagc tctaatgag actatagcaa ggcggctgtg ggaagtcaat 240
tgtgacctgc tgggacctccc aatagactaa caggcagtg cagttggacc caagagaaga 300
ctgcagcaga c 311

```

<210> 468

<211> 3112

<212> DNA

<213> Homo sapiens

<400> 468

```

cattgtgttg ggagaaaaac agaggggaga tttgtgtggc tgcagccagag ggagaccagg 60
aagatctgca tgggtgggaag gacctgaltga tacagagttt gataggagac attaaaggc 120
tgggaaggcac tggatgcutg atgatgaagt ggaatttcaa actggggcac tactgaaacg 180
atgggatggc cagagacaca ggagatgagt tggagcaagc tcaataacaa agtgggtcaa 240
cgaggacttg gaattgcatg gagctggagc tgaagtttag cccaattggt tactagttga 300
gtgaatgtgg atgattggat gatcatttct catctctgag cttcagggtt occatccta 360
aatgggata cacagtatga tctataaagt gggatctagt atgatctact tcaatgggtt 420
atttgaaagg tgaattgaga laatttattt cagggtgcta gaacaaatgoc cagattagla 480
catttggtgg aactgggaaa tggcataaca ccaaatctta tatatgtcag atgttactat 540
gattatcatt caatctcata gttttgtcat ggcccaattt atctcactt gtgctcaca 600
aattgaaact gttacaaaag gaatctctgg tcttgggtaa tggctgagca ccaactgagca 660
tttcatttc agttgggttc ttgggtttgc tagctgcato actagtcato ttaataaast 720
gaagtcttaa cattcttcca gtyatttttt tatctcactt ttgaagatoc tatgttatgt 780
gattaaataa agtaacttgag aagaacaggc ttcattaaac ataaaaacaa tctagagcca 840
aattttcttg atgggcaata cttatgttca caggaaatgc tttaaaatat gcagaagata 900
attsaatggc aatggacaaa gtgaacaaact tagacttttt tttttttttt gyaagtatct 960
ggatgttccf tagtcaactta agggagaact gaaaatagc agtgagttcc acatcaatca 1020
acctgtgaga ttaaggctct ttgtggggaa ggaacaaagat ctgtaaatll acagtttctt 1080
tccaaagcca agtctgaatt ttgaacata tcaaaagctct tcttcagac aaataatcta 1140
tagtacetct ttcttatggg atgcanttat gaaaatggt ggcgtgtcac atctagtcac 1200

```



```

tttagctctc aaaatggllc attttaagag aaagtlltcg aatctcatal ttattcctgt 1260
gyaaggyacng cattgtggct tggactllat aaggtcttta ttcgaactaa taggtgagaa 1320
ataagaaagg ctgctgactt taacatctga ggcracacat ctgctgaaat ggaghtaatt 1380
aaatccactn yaacacagca gatgacaata caatgtctaa gtgltgaant gtttttgcac 1440
atttcnager ccttttaata tccacacaca caggaagcac aaaggaagc acagagater 1500
ctgyyagaaan tgcocggccg ccatcttggg tontogatga gcclogccct gtgcctgggc 1560
ccgcttctga gggaaaggac ttagnaatg aattgatgtg ttccttaag gatgggcagg 1620
aaaacagatc ctgttctgga tatttatltg aacgggatta cagetttgan atgaagtcac 1680
aaagttagca ttacacacga gaggaaacaa gacgagaaan tcttgatggc ttcaaaagac 1740
atgcacacaa caaatggaa tactgtgatg acatgaggca gccaaagctg ggaggagata 1800
accacggggc agagggtcag gattctggcc ctgclgctta aactgtgngt tcatuaccaa 1860
atcatttcot atttctaarc ctcaaaacaa agctgttcta ctatctgate tctacgggtc 1920
cttctgggac caacattctc tatatatcca gccacactca tttttaatat ttayttccca 1980
gatctgtact gtgacctttc tacactgtag aatuuacatta ctcatcttct tcaaaagccc 2040
ttcgtgttgc tgcctaaat gtgctgact gtlltctcta aggagtgttc tggccragg 2100
gatctgtgaa caggctggga agcatctcaa gatctttcca ggggtatact tactagcacu 2160
cageatgate attacggagc guattatcta atcaacatca tctcagtggt ctctgccat 2220
actgaaatcc atttccact ttgtgccc ttctcaagac ctcaaatgt cattccatta 2280
atatacaggg attaactttt ltttttaarc tggaaagatt caatgttaca tgcagctatg 2340
ggaattltaa taatatattt gttttccagt gcaagatga ctgaagtctt tatccctccc 2400
ctttgtttga ttttttttcc agtatuaagt taaaatgctt agccttctac tggagctgta 2460
tacagccaca gccctctccc atccctccag ccttatctgt catcaccate aacccctccc 2520
atguacctaa acaaaatcta acttgaatc ccttgaacat gtcaggcata cattattct 2580
tctgctgag aagctcttcc ttgtcttta aatctagaaat gatgtaaagt ttgaataag 2640
ttgaatataa aaagtgtaat ttgattataa gactttagat aatatatga aatgcaagag 2700
ccacagaggg aatgtttatg gggcagctt ttgattataa gatgttagat aatatatga aatgcaagag 2760
aacctcatag tatcttatat aatatacttc atttctctat ctctatcaca aatcccaacn 2820
agcttttccc agaatctatg cagtgcaaal ccccaaaagt aacctttatc uattctatg 2880
tyagtgcgt ttagaatttt ggcnaatcat actggtcact tatctcaact ttgagatgtg 2940
tttgtcttg tgaatatttg aaagaaatag ggcactcttg tgagccactl tagggttcac 3000
tcctggcaat aaagaattta caaagaycan aaaaaaaa aa 3112

```

<210> 469

<211> 2229

<212> DNA

<213> Homo sapiens

<400> 469

```

agctctttgt aaattcttta ttgocaggag tgaacctaa agtggctcnc aagagtgcct 60
tatttctttc aatlaactac aaggacaaac acatctcana gttgagatga gtyaccagta 120
tgatttgcga aaattctaaa gcgactcac catgaaatgg ataaaggta cctctgggga 180
tttgactgac atgaattctg tgaagagctt gttggaatatt gtgataagaa tagagaaatg 240
aagtatatta tataagatac tatgaggttc cctgccttct cttcacater caggcttaca 300
aacgtgcccc ataacattc cttctgtggc tottgcatct calatatttn tctaaactct 360
tataatcaaa taccctttta gtatttgcct tctcatgtga tgatgaatct calatgtgtc 420
ccttctttgc atgaagttag atagtcuact ttttcaaac tttaactrat tctagatcta 480
agagacacgg aagagcttct caggcagaag aaataatgta tgcctgacat gttcaaggaa 540
ttacaagtta gatttctgltt aggtgcctgg gaggggttga tgggtgatgac agatcaagct 600
gggggggtcty ggaagaggctg tggclgtata cagcctcagt acaaggtcaa gcatlttaac 660
tttatactgg aaaaaaatac aaacaaaggg gagggataaa ggaacttagtc ctcttctgac 720
cggaaanvaa aatatgtaat taacttcccc tagctgcctg taacattgaa ttcttccagg 780
ttaaaaaaa agtttaactc gtgatattaa tggaaagaca ttttgaggct ttgagaatgg 840
gcacaaagt gggaaatgaa tttcagtatg ggcnaagaca ctgagatga tgttgatlag 900
ataattcaat cctgaatgag catgctgtgt gtcagtaagc ataacctgg aaagatcttg 960

```

```

agatgcttcc cagcctgttc acagatcccc tgggcccagaa cactcccttag gaaaaacagt 1020
cagctacata ttaggcagca acacgaagggt tctttgaaca aaatgagtaa tgttattcta 1080
cagtgtagaa aggtcavagt acagatctgg gaactaataa ttaaaaatga gtgtggctgg 1140
atatatggag aatgttgggc ccagaaggaa ccgtagagat cagatattac aacagctttg 1200
ttttgagggg tgaatatttg aatgatttgg gttatgaacy cncagtttag gcagcagggc 1260
cagaatcctg accctctgcn ccgtggttat ctctcccca gcttggctgc ctcatgtcat 1320
cacagtattc cattctgttt gttgcatgtc ttgtgaagcc atcaagattt cctgtctgtt 1380
tttctctcca ttggtaatgc tcactttgtg acttcatttc aaatctgtaa tccggttcaa 1440
ataaatatcc acaacaggat ctgttttccf gccatcctt taaggaaacac atcaattcat 1500
ttctaatgt ctttccctca ccaaggggac caggcaragg gcgaggtcca tggatgaccc 1560
aagatggggg ccgggcattt ctercaggga tctctgtgct tcttttctg cttcctgtgt 1620
gtgtggatat taaagggggc tggaaatgtg caaaacatg tcaatactta gacattatat 1680
tgtcatcttg ctgttcttag tgatgttaat catctcatt tcagcagatg tgtggcctca 1740
gatggtaagg tcagcagcct ttcttatttc tcaatggaa ataatataga ccatttgagg 1800
agacaaatgg caaggtgtca gcataccctg aaclttaggt gagagctaca caaatatta 1860
ttggtttccg agcatcaca acacccctct tgtttcttca ctgggcacag aattttaata 1920
cttattttcag tgggtgttg gcaggaaaca atgaaagcatt ctacataaag tcaatagtgc 1980
agtgactgac acacaccatt ctcttgaagt cccctctaga gatccacag gtcatatgac 2040
ttcttggggg gcagtggctc acacctgtaa tccagcact ttgggagggt gaggcaggtg 2100
ggctacactg ggtcaggagt tcaagacacg cctggcraat atggtgaac ccacctcta 2160
ctaaaaatac aaaaattagc tgggcgtgct ggtgcctgac tgcaatccca gcccaaacac 2220
aatgggaatt.

```

<210> 470

<211> 2426

<212> DNA

<213> Homo sapiens

<400> 470

```

gtaaattctt tattgccaggt agtgaacct aaagtgggtc acaagagtgc cctatttctt 60
tcaatbaact acaaggacaa acacatctca aagttgagat aagtgaccag tatgatttgc 120
caaaattcta aagcgactc accatgaaat ggataaaggc tacctttggg gatttgcart 180
gcattgaattc tctgaaaagc ttgttggata ttgttagaga gatagagaa tgaagtatct 240
tatataagat actatgaggt tccctgcctt tgcttccact ccaggtcta caaactgtgc 300
ccataaacat tccctctgtg gctcttgcac ttcatatatt tatctaaact ctataatca 360
aattacactt ttagtatctg ctgtctcatg tgatgatgaa tctcatatgt gtccctctt 420
tgcattgaagc aagatagtca acttattcaa aaacttaccat cattctagat ttaagagaca 480
aggaagagct tctcaggcag aaggaataat gtatgcctga catgttcaag gaattacnag 540
ttagattttg tttaggtgca tgggaggggt tgatgggtgat gacagataag gctggaggga 600
tggggagagg ctgtggctgt atacagctc agtacaaggc taagcatttt aactttatc 660
tggaaaaaaa atcaaacaaa ggggagggat aaaggactta gtcatctttg cactggaaaa 720
caaatatagt aattaaatto ccatagtctg atgtaacatt gaattcttcc aggttaaaaa 780
aaaaagttaa tctgttgata ttaattggaat gacattttga ggtcttgaga atgggcacaa 840
aagtgggaaa tgaattccag tatgggcaaa gacactgagg atgatgttga ttagataaatt 900
cactccgtta tgatcatgct gtgtgctagt aagtataacc ctggaaagat cttgagatgc 960
ttccragcct gttcaacgat cccctgggcn agaacctcc ttaggaaaaa cagtcagcta 1020
catactaggc agcaacacga agggcttttg acaaaatga gtaattgtat totacagtgt 1080
agaaagggtc cagtcacgat ctgggaacta atattaaaa atgagtggtg ctggatatat 1140
ggagaatgtt gggcccagaa ggaacgtag agatcagata ttacaacagc tttgttttga 1200
gggttagaaa tatgaattga ttgtgtatg aargcagat ttaggcaga gggcuaaat 1260
cctgaccctc tggccgctgg tcatctctct ccagcttgg ctgctcatg tcatcagc 1320
attccatttt gtttgttgca tgtcttgtga agcactcaa atttctctgt ctgtttctt 1380
ctcat.tggta atgtccact tgtgacttca ttcaaatct gtaatccgt tcaaataaat 1440
atcccaaca ggatctgtt. tctgcccac ctttaaggga acuatcaat tcaatttcta 1500
atgtcttcc ctcaaacggt ggaacaggca cagggcaggt ctcatcgatg aocaaagatg 1560

```

```

gCGGCGGGGc atttctccca gggatclctg tgettccttc tglacttcoo gtgtgtgttg 1620
atatttzaag gggctgggaa tgtgcaaaaa catgicacta cttagacatc atattgtcat 1680
cttgctgttl ctagtgatgt taattakctc catttcagca galgtgttgg ctcagatggt 1740
aaagtcagca gcnttcttca tttctcarct ggaaatctat acgaccattt ggggagacaa 1800
atggcaaggc gtccgcatac cctgaaactt agttgagagc tacacacuat attatlggtt 1860
tccgagcacc acaaacaccc tctctgttct ttcactgggc acagaatttt catctctatt 1920
tcagtggggt gttaggcagg acaaatgaaq caatctacat aaagtcauta gtgcagtgtc 1980
tgacacacac catctctctt aggtcccttc tagagatctc acaggtcata tgaactcttg 2040
ggggagcagt gctcacacct gtaatcccaq cactttggga ggttgaggca ggtgggtcac 2100
ctgaggtcag gagttcaaaq ccagcctggc caalctgttg aaacccatc tctactaaaa 2160
atcaaaaaat tagctgggag tgcgggtgca tgcctgtaat cccagctact tgggaggttg 2220
aggcaggaga attgctggaa catgggaggc ggaggcttga gtgagctgta attgtgccc 2280
tgcactcgaq cctgggcgac agagtggaac tctgtttcca aaacacaaac aaacaaacaa 2340
ggcatagtca gatcacacgt gggtaggatg tglcaataga agraggatal aaagggcagt 2400
gggtgacagc tttgcccac acaatg

```

<210> 471

<211> B12

<212> DNA

<213> Homo sapiens

<400> 471

```

gaacaaatg agtaatgta ttctacagtg lappaaaggtr acagtacaga tctgggaant 60
aaatattaaa aatgagtgtg gctggatata tggagaatgl tyggccraga aggaacagta 120
gagatcagat artacacag ctttgttttg agggctagaa atatgaatg atttgggtat 180
gaacgcacag tttaggcagc agggcagaa tctgacccr ctgccccttg gttatctct 240
ccccagcttg gctgctcal gtatcacag talccattt tgttgttgc atgtcttgtg 300
aagccatcaa gattttcttg tctgttttcc tctcattggg aatgtcact tgtgacttc 360
atttcnaatc tgtaatccg ttcnaataaa tatccacac aggatctgtt tctctgccc 420
tcttctaaag aaacacatca ttcatttctc aatgtccttc cctcacaaac gggaccaggc 480
acagggcgag gctcatcgat gcccaagat ggccggccgg catttcttcc agggatctct 540
gtgcttcttc tbggtcttc tgtgtgtgtg gatatttana ggggctggaa atgtgcaaaa 600
aatgtcact acttagacat tatattgtca tcttgctgtt tctagtgatg ttaattctct 660
catttccagc agctgtgttg cctcagatgg taaagtccgc agcnttctct atttctcaac 720
tctgtatcat caggtcttcc ccccatgca gatcttctg gtctccctcg gctgcaagaa 780
cacaatctc cccctctgtt ttctgatgrr ag

```

812

<210> 472

<211> 515

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> {1}...{515}

<223> n = A,T,C or G

<400> 472

```

anaggagact atttcttgat attgtctgca tatgtatgtt ttaagagtc tggaaatagt 60
cttatgactt tcttalcatg cttatttaata paluatacag cccagagagag atgaaatgg 120
gltccagaaat tattggctct tgcagcccg tgaatctcaq caagaggaaac caccacatga 180
caatcaggat altgaaoutg gacaaagagag agaaaggaaac ccttcgatcg aagaacgtaa 240
agtayaxygt gattgcccagg aatygatct ggaaagact cygagtgagc gfggaatgtg 300
ctctgatgta aaagagaaq ctcacactaa tcttaagcat gctaaacta aagaaagcag 360
agatgggcag ccataagtta aaaagaaqac aagctgaagr lacacacatg gctgatgltc 420

```

Cattgaaat gtgactgaaa atttgaat tctctcaata aagtttgagt ttt.ctctgaa 480
gaaaaaaa aaabababab ababababab ababab 515



INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁷ : C12N 15/12, C07K 14/47, C12Q 1/68, A61K 39/395, G01N 33/68, 33/574, C07K 16/30, C12N 15/62, 5/02 // A61P 35/00		A3	(11) International Publication Number: WO 00/04149
(21) International Application Number: PCT/US99/15838		(43) International Publication Date: 27 January 2000 (27.01.00)	
(22) International Filing Date: 14 July 1999 (14.07.99)		(74) Agents: MAKI, David, J. et al.; Seed and Berry LLP, 6300 Columbia, 701 Fifth Avenue, Seattle, WA 98104-7092 (US).	
(30) Priority Data: 09/115,453 14 July 1998 (14.07.98) US 09/116,134 14 July 1998 (14.07.98) US 09/159,822 23 September 1998 (23.09.98) US 09/159,812 23 September 1998 (23.09.98) US 09/232,880 15 January 1999 (15.01.99) US 09/232,149 15 January 1999 (15.01.99) US 09/288,946 9 April 1999 (09.04.99) US		(81) Designated States: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).	
(71) Applicant: CORIXA CORPORATION [US/US]; Suite 200, 1124 Columbia Street, Seattle, WA 98104 (US).		Published <i>With international search report.</i>	
(72) Inventors: DILLON, Davin, Clifford; 21607 N.E. 24th Street, Redmond, WA 98053 (US). HARLOCKER, Susan, Louise; 6203 20th Avenue N.W., Seattle, WA 98107 (US). YUQIU, Jiang; 5001 South 232nd Street, Kent, WA 98032 (US). XU, Jiangchun; 15805 S.E. 43rd Place, Bellevue, WA 98006 (US). MITCHAM, Jennifer, Lynn; 16677 Northeast 88th Street, Redmond, WA 98052 (US).		(88) Date of publication of the international search report: 20 July 2000 (20.07.00)	
(54) Title: COMPOSITIONS AND METHODS FOR THERAPY AND DIAGNOSIS OF PROSTATE CANCER			
(57) Abstract Compositions and methods for the therapy and diagnosis of cancer, such as prostate cancer, are disclosed. Compositions may comprise one or more prostate tumor proteins, immunogenic portions thereof, or polynucleotides that encode such portions. Alternatively, a therapeutic composition may comprise an antigen presenting cell that expresses a prostate tumor protein, or a T cell that is specific for cells expressing such a protein. Such compositions may be used, for example, for the prevention and treatment of diseases such as prostate cancer. Diagnostic methods based on detecting a prostate tumor protein, or mRNA encoding such a protein, in a sample are also provided.			

FOR THE PURPOSES OF INFORMATION ONLY

Codes used to identify States party to the PCT on the front pages of pamphlets publishing international applications under the PCT.

AL	Albania	ES	Spain	LS	Lesotho	SI	Slovenia
AM	Armenia	FI	Finland	LT	Lithuania	SK	Slovakia
AT	Austria	FR	France	LU	Luxembourg	SN	Senegal
AU	Australia	GA	Gabon	LV	Latvia	SZ	Swaziland
AZ	Azerbaijan	GB	United Kingdom	MC	Monaco	TD	Chad
BA	Bosnia and Herzegovina	GE	Georgia	MD	Republic of Moldova	TG	Togo
BB	Barbados	GH	Ghana	MG	Madagascar	TJ	Tajikistan
BE	Belgium	GN	Guinea	MK	The former Yugoslav Republic of Macedonia	TM	Turkmenistan
BF	Burkina Faso	GR	Greece	ML	Mali	TR	Turkey
BG	Bulgaria	HU	Hungary	MN	Mongolia	TT	Trinidad and Tobago
BJ	Benin	IE	Ireland	MR	Mauritania	UA	Ukraine
BR	Brazil	IL	Israel	MW	Malawi	UG	Uganda
BY	Belarus	IS	Iceland	MX	Mexico	US	United States of America
CA	Canada	IT	Italy	NE	Niger	UZ	Uzbekistan
CF	Central African Republic	JP	Japan	NL	Netherlands	VN	Viet Nam
CG	Congo	KE	Kenya	NO	Norway	YU	Yugoslavia
CH	Switzerland	KG	Kyrgyzstan	NZ	New Zealand	ZW	Zimbabwe
CI	Côte d'Ivoire	KP	Democratic People's Republic of Korea	PL	Poland		
CM	Cameroon	KR	Republic of Korea	PT	Portugal		
CN	China	KZ	Kazakstan	RO	Romania		
CU	Cuba	LC	Saint Lucia	RU	Russian Federation		
CZ	Czech Republic	LI	Liechtenstein	SD	Sudan		
DE	Germany	LK	Sri Lanka	SE	Sweden		
DK	Denmark	LR	Liberia	SG	Singapore		
EE	Estonia						

INTERNATIONAL SEARCH REPORT

International Application No

PCT/JS 99/15838

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C12N15/12 C07K14/47 C12Q1/68 A61K39/395 G01N33/68
 G01N33/574 C07K16/30 C12N15/62 C12N5/02
 //A61P35/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C12N C07K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 97 33909 A (CORIXA CORP) 18 September 1997 (1997-09-18) the whole document	1-22, 29-31, 35-49, 53-79
A	--- SJOGREN H O: "Therapeutic immunization against cancer antigens using genetically engineered cells" IMMUNOTECHNOLOGY, vol. 3, no. 3, 1 October 1997 (1997-10-01), pages 161-172, XP004097000 ISSN: 1380-2933 the whole document --- -/--	23-28, 32-34, 53-57



Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

* Special categories of cited documents :

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

T later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

X document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

Y document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

S document member of the same patent family

Date of the actual completion of the international search

31 January 2000

Date of mailing of the international search report

04.05.00

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
 NL - 2280 HV Rijswijk
 Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
 Fax: (+31-70) 340-3016

Authorized officer

ANDRES S.M.

INTERNATIONAL SEARCH REPORT

International Application No

PC1, JS 99/15838

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	CHU R S ET AL: "CPG OLIGODEOXYNUCLEOTIDES ACT AS ADJUVANTS THAT SWITCH ON T HELPER 1 (TH1) IMMUNITY" JOURNAL OF EXPERIMENTAL MEDICINE, vol. 186, no. 10, 1 November 1997 (1997-11-01), pages 1623-1631, XP002910130 ISSN: 0022-1007 the whole document ---	14-20, 25-27, 41-47
A	EP 0 317 141 A (BECTON DICKINSON CO) 24 May 1989 (1989-05-24) the whole document ---	50-52
A	ZITVOGEL L ET AL: "Eradication of established murine tumors using a novel cell-free vaccine: dendritic cell-derived exosomes" NATURE MEDICINE, vol. 4, no. 5, 1 May 1998 (1998-05-01), pages 594-600, XP002085387 ISSN: 1078-8956 cited in the application ---	
P,X	WO 98 37093 A (CORIXA CORP) 27 August 1998 (1998-08-27) page 3, line 20 -page 22, line 2 page 35, line 9 - last line page 76, line 34 -page 78, line 22 claims ---	1-15, 17-19, 21,22, 29-31, 34,35, 39-42, 44-46, 48,49, 58-79
P,X	WO 98 37418 A (CORIXA CORP) 27 August 1998 (1998-08-27) page 2 -page 24 example 2 page 35, line 15 -page 36, line 11 page 81, line 14 -page 83, line 11 claims -----	1-15, 17-19, 21,22, 29-31, 34,35, 39-42, 44-46, 48,49, 58-79

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US 99/ 15838

Box I Observations where certain claims were found unsearchable (Continuation of Item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
Remark: Although claims 29-34, 48-49, 52, 55-57
are directed to a method of treatment of the human/animal
body, the search has been carried out and based on the alleged
effects of the compound/composition.
2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such
an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of Item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all
searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment
of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report
covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is
restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1-79 all partially

Remark on Protest

☐ The additional search fees were accompanied by the applicant's protest.

☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

.....

Invention 1. Claims: 1-79 (all partially)

A polypeptide comprising at least an immunogenic portion of a prostate tumor protein defined as SEQ ID 108 and which is encoded by the related SEQ IDs 2,3,107 (according to the Description of the Sequence Identifiers), fragments and variants thereof, fusion proteins comprising it, polynucleotides or oligonucleotides derived therefrom, antibodies or fragments thereof binding to the polypeptide, pharmaceutical compositions or vaccines comprising these products and their use in methods for inhibiting, monitoring or diagnosing the development of a prostate cancer, for removing tumor cells from a sample or for expanding and/or stimulating T-cells.

Inventions 2. to 439. Claims: 1-79 (all partially and as far as applicable)

As for subject 1. but concerning respectively SEQ IDs 1,4-106,109-111,115-171,173-175,177,179-305,307-315,326,328,330,332-335,340-375,381,382 and 384-472.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/JS 99/15838

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 9733909 A	18-09-1997	AU 2329597 A	01-10-1997
		BR 9708082 A	27-07-1999
		CA 2249742 A	18-09-1997
		EP 0914335 A	12-05-1999
		NO 984229 A	13-11-1998
		US 6034218 A	07-03-2000

EP 0317141 A	24-05-1989	US 5041289 A	20-08-1991
		AT 108659 T	15-08-1994
		DE 3850745 D	25-08-1994
		DE 3850745 T	24-11-1994
		ES 2059537 T	16-11-1994
		JP 2002345 A	08-01-1990

WO 9837093 A	27-08-1998	AU 6181898 A	09-09-1998
		NO 994069 A	22-10-1999
		ZA 9801585 A	04-09-1998

WO 9837418 A	27-08-1998	AU 6536898 A	09-09-1998
		EP 0972201 A	19-01-2000
		ZA 9801536 A	08-01-1999

Form PCT/ISA/210 (patent family annex) (July 1992)

